MEDIA LITERACY AND ATTITUDE CHANGE: ASSESSING THE EFFECTIVENESS OF MEDIA LITERACY TRAINING ON CHILDREN'S RESPONSES TO PERSUASIVE MESSAGES WITHIN THE FRAMEWORK OF THE ELABORATION LIKELIHOOD MODEL OF PERSUASION

By

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by

Bradford L. Yates

This dissertation is dedicated to the memory of my father, Alvin L. Yates, and to my mother, Jean F. Yates. Mama and Daddy, I love you so very dearly.

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Many times during this journey I thought I would never reach the goal I had set for myself over ten years ago. However, the unending support of those around me is the reason I survived the most difficult task in my life to date. I would like to thank those who have helped me make my dream come true.

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MEDIA LITERACY AND ATTITUDE CHANGE: ASSESSING THE EFFECTIVENESS OF MEDIA LITERACY TRAINING ON CHILDREN'S RESPONSES TO PERSUASIVE MESSAGES WITHIN THE FRAMEWORK OF THE ELABORATION LIKELIHOOD MODEL OF PERSUASION

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The average American child sees in excess of 30,000 television commercials for various products each year. Most commercials are constructions of reality that attempt to sell a product or advocate an idea. Children need to understand how to evaluate and analyze critically the values and ideologies that accompany commercial messages. In short, children need to be media literate.

This dissertation adds to the small but growing body of literature that examines the effectiveness of media literacy training on children's responses to persuasive messages. Within the framework of the Elaboration Likelihood Model (ELM) of persuasion, this research investigates whether media literacy training is a moderating variable in the persuasion process and whether such training affects children's attitudes toward a product of high personal relevance. A posttest-only experimental design with

random assignment was used to test five independent variables: Active cognitive processing; attitude toward product; attitude toward advertisement; attitude toward TV advertising in general; and attention to peripheral cues. It was hypothesized that subjects exposed to media literacy training would follow the central route to persuasion, as opposed to the peripheral route, and have more positive attitudes toward an advertised product when exposed to many and few strong quality arguments.

Test results suggested that media literacy training was not a moderating variable in the ELM. Additionally, no evidence was found to support the prediction that media literacy, argument quality, and number of arguments influence children's attitudes. However, results indicated that media literacy training did produce differences in attitudes among subjects. Subjects exposed to the training had more negative attitudes toward the product, the advertisement, TV advertising in general, and certain peripheral cues.

The findings suggest that media literacy training makes subjects more skeptical of commercial messages because they are more aware of the techniques used by advertisers to try and persuade viewers. If children can become more aware of the persuasive techniques used by advertisers, then they will be better equipped to analyze commercials more critically and hopefully make better decisions about products. Moreover, media literacy training built into existing school curricula could be very effective at creating critical viewers.

CHAPTER 1
INTRODUCTION

Children are exposed to persuasive messages in the media every day. The average American child sees in excess of 30,000 television commercials for various products each year (Condry, Bence, & Scheibe, 1988). By the time a student graduates high school "he or she will have spent twice as much time in front of the television set as in the classroom" (Pungente, 1996, p. 9). The influence and pervasiveness of television is evident in children's basic values, clothing choices, and interpersonal interactions (Pungente, 1996).

Since most commercials and other media messages are constructions of reality that have a specific purpose--usually to sell a product or advocate an idea--children need to understand how to evaluate and analyze critically the values and ideologies that accompany these products and ideas (Melamed, 1989). In short, children need to be **media literate**. Through media education students learn how to identify such ideological messages and analyze the underlying values that are communicated.

Although several researchers have argued that media literacy training will improve students' evaluation of media messages (Considine, 1990; Duncan, 1989; Kahn & Master, 1992; Melamed, 1989; Wulfemeyer, Sneed, Ommeren, & Riffe, 1990), few studies have tested the effectiveness of such training empirically. Therefore, the purpose

of this investigation is to assess the effectiveness of media literacy training on children's evaluation of persuasive media messages.

Empirical Studies Focusing on Media Literacy

Scholarly research suggests that media portrayals--particularly in advertising--are linked to children's attitudes and behaviors toward health issues such as alcohol consumption (Aiken, Leathar, & O'Hagan, 1985; Austin & Johnson, 1997a; Austin & Johnson, 1997b; Austin & Nach-Ferguson, 1995). Recent work by Austin and her colleagues (Austin, 1995; Austin & Freeman, 1996; Austin & Johnson, 1997a; Austin & Johnson, 1997b; Austin & Meili, 1994; Austin & Nach-Ferguson, 1995; Austin, Roberts, & Nass, 1990) suggests that more effective health-related interventions should target children's decision-making strategies rather than inform or persuade based on campaign priorities. Austin and colleagues developed the Message Interpretation Process (MIP) model based on work in decision-making theory, social-cognitive development and media effects research. The MIP model views children as active decision-makers who make decisions based on their skills, needs, goals, and environment. The model posits a theory of media decision-making and identifies logical and emotional decision-making processes of children. Message designers can use the model to identify the most effective point of intervention. Austin and Johnson (1997a, 1997b) found that children's understanding of persuasive content is a key variable in the decision-making process. In their studies, media literacy training was identified as an effective means of improving children's understanding of persuasive media content.

Austin and Johnson (1997b) tested the immediate and delayed effectiveness of media literacy training on third-graders' "perceptions of alcohol advertising, alcohol norms, expectancies for drinking, and behaviors toward alcohol" (p. 323) using a Solomon four-group style experiment (N=246). Third-graders in three schools were randomly assigned to four groups (each with an n=60). A fourth school was split into four groups by classroom. Two groups of children were pretested. A month after the pretest, children in the experimental groups received media literacy training. The children watched *Buy Me That! A Kids' Survival Guide to TV Advertising*, a half-hour Consumer Reports (Consumers Union of United States, 1989) video focusing on advertising techniques. After the video the youngsters discussed the techniques with the experimenter. Materials produced by Consumer Reports to complement the video guided the discussion. Following the discussion, the children were shown a randomized-order series of soda and beer ads. There were two soda ads and two beer ads that were shown to each group in a different order. After each ad, the tape was stopped and the skills learned in the Consumer Reports video were discussed in terms of the specific advertisement. The discussion followed Messaris' (1982) theoretical principles of mediation, focusing on the extent to which the ad showed "(a) what was real, (b) what was right or wrong, and (c) how what was shown relates to real life" (Austin & Johnson, 1997b, p. 323). After training, children received bookmark style handouts to reinforce the "Three R's" of critical viewing (Austin, 1993), which include "(a) Realism, (b) Right and Wrong, and (c) Relating the information source to what other sources say" (Austin & Johnson, 1997b, p. 332). Control groups engaged in a different activity planned by the teacher.

All groups (control and experimental) took a posttest immediately after the media literacy lesson and the teacher-planned activity. A delayed posttest was administered three months later. Pretest and posttest were nearly identical with the posttest containing several critical viewing knowledge questions as a manipulation check. The delayed posttest, which was administered by the teacher without assistance from the researcher, was identical to the posttest except for the behavioral question, which asked subjects to indicate their level of desire for selected products (e.g., "How much would you want to own item A?").

> Short-term effects were found for understanding of persuasive intent, perceptions of realism, desirability, social norms for alcohol use, and predrinking behavior. Results retained significance at delayed posttest for perceived realism and identification. Some gender differences existed. (Austin & Johnson, 1997b, p. 323)

Austin and Johnson (1997a) also examined the immediate and delayed effects of general and specific media literacy training on third-graders' decision-making processes about alcohol. Areas of examination included children's perceptions of alcohol ads, alcohol norms, expectancies for drinking, and behaviors toward alcohol. A Solomon four-group style experiment with two treatment levels (general and specific) assessed the effectiveness of in-school media literacy training. Both treatments involved a general purpose media literacy videotape about television advertising; however, one treatment showed alcohol specific television ads followed by discussion of alcohol specific advertising while the other showed clips of non-alcohol advertisements followed by discussion of advertising in general. Results indicated immediate and delayed effects of media literacy training.

Immediate effects included the children's increased understanding of persuasive intent, viewing of characters as less similar to people they knew in real life and less desirable, decreased desire to be like the characters, decreased expectation of positive consequences from drinking alcohol, and decreased likelihood to choose an alcohol-related product. Indirect effects also were found on their perceptions of television's realism and their views of social norms related to alcohol. Delayed effects were examined and confirmed on expectancies and behavior. The treatment was more effective when alcohol-specific, and it also was more effective among girls than boys (Austin & Johnson, 1997a, p. 17).

These two empirical studies identified media literacy as an effective means of improving children's understanding of persuasive media content within a decision-making framework. The present study, which builds on Austin and Johnson's research, attempts to understand how media literacy helps to improve children's understanding of persuasive media content by examining media literacy within the framework of an established model of persuasion.

ELM as a Framework

In order to measure effectively the impact of media literacy training on children's responses to persuasive messages the Elaboration Likelihood Model of persuasion (ELM) (Petty & Cacioppo, 1986a, 1986b) will be used to provide a framework for this investigation. The rationale for choosing the ELM as a framework lies in the desire to determine if media literacy skills of a message recipient are a moderator of persuasion. Petty and his colleagues (Cacioppo & Petty, 1979; Petty, Cacioppo, & Goldman, 1981a;

Petty, Harkins, & Williams, 1980; Petty, Wells, & Brock, 1976) noted several variables could play a moderating role in the persuasion process. These include personal involvement, forewarning of persuasive intent, argument quality, number of arguments, source attractiveness, source expertise, mood, message repetition, and distraction. This researcher believes that media literacy skills can have a moderating effect on the persuasion process. Therefore, this study aims to test the moderating effect of media literacy training on children's attitude toward the persuasive message(s) contained in product advertisements.

The ELM has developed into a general framework for the study of persuasion in the field of social psychology, but it also has been applied effectively to advertising communications (Petty & Cacioppo, 1983; Petty, Cacioppo, & Schumann, 1983) and become popular in the field of consumer behavior (Scholten, 1996). Petty and his colleagues have tested the ELM in terms of issues (e.g., comprehensive exams) (Petty & Cacioppo, 1979a; Petty et al., 1981a) as well as advertised products (Petty et al., 1983). Others have used the ELM to explain advertising effectiveness and tested the influence of attitude toward the ad within the framework of the ELM.

Scholten (1996) argued that the ELM is useful for advertising research because of its heuristic advantages rather than its integrative merits.

> The ELM overcomes a critical limitation of traditional hierarchy-of-effects models by relaxing the assumption that cognitively complex changes in consumer attitudes are necessary for effective advertising. By identifying two distinct routes to attitude change, the model generates valuable suggestions concerning advertising effectiveness. (Scholten, 1996, p. 100)

Other researchers have found the ELM useful for analyzing comparative advertising ((Droge, 1989), "while accounting for the potential influence of attitude

toward the ad" (MacKenzie & Lutz, 1983, cited in James & Hensel, 1991, p. 60). Lutz, MacKenzie, and Belch (1983) found that attitude toward the ad may serve as a positive or negative peripheral cue within the ELM framework. Petty and Cacioppo (1983) reported that attitude toward the ad had stronger effects on attitude change than brand cognitions under low involvement and low knowledge conditions. Additionally, attitude toward the ad was found to have a greater impact on attitude than brand cognitions under high elaboration likelihood conditions (Petty & Cacioppo, 1983). In other words, the findings revealed that subjects' attitudes toward an advertised product were influenced more by their attitude toward the ad than their thoughts about the actual product.

Lord, Lee, and Sauer (1995), tested two competing hypotheses relative to the formation of attitude toward the ad and found that "results supported the combined-influence hypothesis across varying levels of processing motivation and opportunity with differences in the relative magnitude of argument and cue effects consistent with the Elaboration Likelihood Model" (p. 73). The ELM is an excellent framework to adequately explain the effectiveness of advertising; however, "the influence of attitude toward the ad as a negative cue within this framework is not fully understood in the context of negative advertising" (James & Hensel, 1991, p. 62). More specifically, the ELM explains the effectiveness of advertising well, but it is unclear what effect attitude toward the ad has when it is considered a negative influence within a negative advertisement.

Over time, the ELM has developed into one of the most comprehensive models of persuasion in the media effects research. However, much of the ELM research has focused on college-age students, and no studies have examined the moderating role of

media literacy skills. This study attempts to apply the ELM to a younger population and determine the role of media literacy within the persuasion process.

The average American child will spend twice as much time in front of the television as in the classroom by the time he/she graduates high school (Pungente, 1996). It is evident that children need to be equipped with skills that help them evaluate the enormous number of persuasive media messages. In order to be sure that media literacy is an effective means of inoculating children against persuasive messages, a closer look at the impact of media literacy skills on the persuasion process is necessary.

CHAPTER 2
LITERATURE REVIEW

The following review of literature will highlight the evolution of the media literacy movement and provide a formal definition of media literacy. The discussion also will address the evolution of persuasion research and key components of the Elaboration Likelihood Model of persuasion through a review of relevant experiments and commentaries. In addition, literature relating to television and child development and attitudes toward advertisements will be reviewed. Finally, research questions and hypotheses based on the relevant literature will be advanced.

Media Literacy

What individuals know about the world beyond their immediate surroundings comes via the media (Ontario Ministry of Education, 1989). Unfortunately, the media do not present their messages in a neutral and value-free way; they shape and distort reality (Considine, 1990; Melamed, 1989). These value-laden messages and constructions of reality pose a problem for society because individuals, especially children, are unable to distinguish between truthful and misleading messages sent by the media. It is through media literacy that they can be taught to be informed and responsible consumers of the media.

Several researchers made calls for the inclusion of media education within existing U.S. school curricula in the late 1980s and early 1990s (Considine, 1990; Duncan, 1989; Kahn & Master, 1992; Melamed, 1989; Wulfemeyer, Sneed, Ommeren, & Riffe, 1990). They argued that media education makes students critically aware of what they see, hear, and read, and it should be taught regularly in elementary and secondary schools. Several states, including Georgia, New Mexico, North Carolina, Minnesota, and Massachusetts, heeded this call by instituting some component of media literacy within their school curricula (Considine, 1995; Darlington, 1996).

Support and advocacy groups such as the Center for Media Education, the Center for Media Literacy, the National Telemedia Council, Citizens for Media Literacy, the National Media Citizenship Project, and the Children's Media Policy Network were created to push for a media literate society. National conferences, like the annual Media Education Conference and the Media Literacy Citizenship Project conference, have brought together educators, media professionals and concerned citizens in an effort to create a unified voice for media literacy. At the Aspen Institute's[1] National Leadership Conference on Media Literacy in 1992, participants developed a formal definition of media literacy:

> a **media literate person**--and everyone should have the opportunity to become one--can decode, evaluate, analyze and produce both print and electronic media. The fundamental objective of media literacy is critical autonomy in relationship to all media. Emphases in media literacy training range widely, including informed

[1] "The Aspen Institute is an international nonprofit educational institution dedicated to enhancing the quality of leadership through informed dialogue. . . . [Its] Communications and Society Program promotes integrated, values-based decision making in the fields of communications and information policy. It accomplishes this by bringing together representatives of industry, government, the media, the academic world, nonprofits, and others to assess the impact of modern communications and information systems on democratic societies. The Program also promotes research and distributes conference reports to leaders in the communications and information fields and to the broader public" (Aspen Institute, 1996, available http://www.aspeninst.org/Index.html).

> citizenship, aesthetic appreciation and expression, social advocacy, self-esteem, and consumer competence. (Aufderheide, 1993, p.1)

This comprehensive definition illustrates the wide range of skills needed to be media literate. Media literacy teaches students how to deconstruct, analyze, and critique media messages. However, media literacy goes beyond the creation and production of media messages that are the focus of school media (e.g., school newspaper, television productions, and yearbook). Media education provides the opportunity for students to learn to work together toward a common goal. In the process they learn about responsibility, cooperation, and problem solving. No matter what they do in life, they will always encounter situations that require these skills. In addition, students identify their strengths and weaknesses, develop varied interests, and accept new challenges.

The National Communication Association (1998) developed standards for speaking, listening, and media literacy in K-12 education. Furthermore, media literacy is also reaching the community through workshops conducted by the National PTA and "Cable in the Classroom" (Considine, 1995). It is evident media literacy is building a strong network of committed educators, media professionals, and citizens to create a more media literate population.

Critical Viewing Skills Programs

Although the media literacy movement has received increased support in recent years, several of the central issues have been addressed over the last three decades. James A. Brown's book, Television "Critical Viewing Skills" Education: Major Media Literacy Projects in the United States and Selected Countries (1991), is an excellent review of the beginning of the media literacy movement. Many of the central issues were

first investigated in the United States by the federal government; however, funding for such projects was eliminated during the early 1980s. These early federal programs laid the foundation for future research by scholars and public interest groups about the potential benefits and necessity of media literacy programs.

Evolution of Critical Viewing Skills

Critical thinking is one of the fundamental elements of media literacy. It was the goal of early Greek philosophers and continues to be a priority in education. Critical analysis has been applied to all forms of communication. Early forms of print communication (e.g., books), mass media forms of print communication (e.g., newspapers, magazines), and visual communication (e.g., motion pictures) have been critically read or viewed over the years in an attempt to better understand what their messages are and how they are created (Brown, 1991).

Despite this history of critical reading and viewing, educational institutions were slow to recognize the value of formally teaching audiences how to evaluate critically mass media experiences. In the 1920s and 1930s, film appreciation courses began to spread throughout the United States and England, due in part to the growing number of contemporary movies (Brown, 1991). It was not until the 1960s that film studies were integrated fully into the curriculum of U.S. high schools and colleges, despite the presence of film courses since the 1930s (Worth, 1981). Finally, in the late 1970s, cinema courses began to incorporate film skills along with theory and criticism (Brown, 1991).

While educators were gradually recognizing the value of aiding audiences in their interpretation and analysis of the cinema, television was making its own

impact. In the beginning, educators used television as an instrument for teaching. The U.S. and Great Britain developed and studied the instructional use of television during the 1950s and 1960s. Also during that time, "some curricular designs for teaching better understanding and use of television were developed but not widely used" (Brown, 1991, p. 58).

An UNESCO (United Nations Educational, Scientific, and Cultural Organization) meeting in Norway in 1962 laid the framework for "critical viewing skills" education. Due to the scope and power of television, meeting participants suggested that educators accept the responsibility to teach young people how to use the medium constructively (Hodgkinson, 1964). The aims of "critical viewing skills" education were stated as follows:

I. To help viewers to increase their understanding of what they see on the screen.

II. To encourage viewers to become more selective in their choice of program.

III. To help viewers to become more aware and discriminating in their responses and to develop their power of judgment so that they may benefit from those programs, both imaginative and factual, which have the capacity to enrich their lives.

> The aims of screen education thus consort with those of a truly democratic education, namely, to help the individual to respect and uphold truth and, on the basis of the richest possible personal development, to share and enjoy with his fellow men the treasures which our civilization offers to the human mind and heart. (Hodgkinson, 1964, p. 78)

Eleven years later the Ford Foundation echoed the perspective of UNESCO. The Foundation saw a need for increased and improved mass media instruction within public schools (Ford Foundation, 1975). The report of a Television and Children conference funded by the Ford, Markle, and National Science Foundations recommended several

courses of study as part of a curriculum. Among the subjects were analysis of media appeals, interpretation of non-verbal cues, review of the broadcasting industry's history and structure, the economic aspect of television, analysis of program formats, analysis of values within television content, standards for criticism of content, and production skills (Ford Foundation, 1975).

USOE's Four Seed Projects

Critical viewing skills education received additional support in 1978 when the United States Office of Education (USOE) funded four "seed" projects for elementary and secondary teachers to teach students critical viewing skills (Brown, 1991). Each project was funded for two years. USOE narrowly defined critical viewing skills by relating them only to television. Such skills included understanding the psychological impact of commercials; recognizing fact and fiction; identifying and respecting different points of view; understanding the style and content of various types of programming; and understanding the relation between TV programming and the printed word (Lloyd-Kolkin, Wheeler, & Strand, 1980). These seed projects were established in response to research that found a link between television violence and subsequent aggressive behavior in children (Bandura, Ross, & Ross, 1963; Surgeon's General Scientific Advisory Committee, 1972; Tyner, 1991).

Southwest Educational Development Laboratory (Grades K-5)

Southwest Educational Development Laboratory (SEDL), the first of the four seed projects, was established for teachers of grades K-5 as well as students' parents and youth leaders. The critical viewing skills (CVS) activities were designed for classroom and home use as well as within community organizations. Since it was difficult to add

new components to existing school schedules, SEDL incorporated the program into existing courses. SEDL was designed to teach eight essential television viewing skills. For example, students were taught how to distinguish fact and fiction, understand psychological effects of advertising, and identify various production techniques such as music, special effects, and color (Brown, 1991).

WNET 13, New York City (Grades 6-8)

Since 1972, the Education Division of New York City's noncommercial television station WNET 13 had been conducting critical viewing skills workshops in New York area schools. With federal funding in 1978, WNET developed and tested formalized curriculum materials and conducted workshops for educators and community leaders across the nation. Ten training sessions were set up for school administrators and teacher trainers to help them conduct their own CVS workshops. Ten more sessions were arranged for community leaders and public librarians to help them train parents and children in critical home viewing. WNET's critical viewing skills program was designed for students in grades 6-8, but could be adapted for children at different cognitive levels. Creators of the program intended the concepts and materials to be part of the language arts or social studies curricula as well as to be used at home. A special workbook was developed for students to practice critical writing and thinking skills. For example, students might watch a television program and identify and analyze main ideas, specific details, literary elements, and draw conclusions based on their interpretations (Brown, 1991).

Far West Laboratory for Educational Research and Development (Grades 9-12)

With a grant of $410,000, the Far West Laboratory for Educational Research and Development (FWL) developed a CVS project directed to secondary students. This third USOE project had a fourfold mission. First, the project was to identify TV skills appropriate for teenagers; second, develop and field test course materials for teachers, students and families; third, create materials and provide workshops for educators, parents, and leaders of organizations; and fourth, publish and distribute those materials (Brown, 1991). After testing their initial curriculum, FWL determined their CVS program should address five areas of critical viewing abilities: 1) to assess and manage one's own television viewing behavior; 2) to question the reality of television; 3) to identify persuasive techniques and messages and counter-argue them; 4) to recognize television effects on one's own life; and 5) to use television to facilitate family communications (Brown, 1991). FWL sought to develop these skills by helping students understand the economic basis of television, by teaching them about TV production techniques, and encouraging them to question TV messages and seek answers to their questions (Brown, 1991).

Boston University (Post-secondary and Adults)

In September 1978, the USOE devoted $400,000 to its fourth and final project, which was conducted by the School of Public Communication at Boston University. The project ended on July 31, 1981. The project was directed to college students, parents, and teachers with the intention of affecting the medium itself. The program was built around four modules that presented introductory material that was applied through various activities. The first module examined the structure of the television industry, including

production, programming, economics, regulations, and effects. Module two focused on the persuasive elements of television programming, including credibility and effects of advertising, while module three examined various program genres. The fourth module explored the news media and governmental constraints. The project's director, Donis Dondis (1980), argued that the effort to create critical viewers must begin with future gatekeepers, teachers, and television program producers in order for it to be successful. More specifically, critical viewing skills training "enables these audiences, in their present or future roles as parents, educators, business people, and community leaders, to comprehend and influence programming decisions" (Dondis, 1980, p. 3).

Funding Withdrawn

Despite the success of the four CVS projects, the government withdrew additional funding in the wake of a deep economic recession. The recession cultivated the widespread belief that students needed to know how to compete in the global marketplace, which meant, among other things, that they needed to be computer literate. Since media education was associated with the recreational nature of television, critical viewing skills programs were deemed unnecessary frill and new funding for computer literacy programs replaced critical viewing as a top educational priority (Dondis, 1980).

The Current Media Literacy Movement

The media literacy movement in the United States grew rapidly in the late 1990s (Considine, 1995; Kubey & Baker, 1999). Numerous support and advocacy groups like the Center for Media Education, the Center for Media Literacy, the National Telemedia Council, Citizens for Media Literacy, and the Children's Media Policy Network have

been created to educate the public about the need for media education. The National Communication Association has developed standards for media literacy in K-12 education (National Communication Association, 1998). Kubey and Baker (1999) examined all 50 state curricular frameworks and found that 48 states contained one or more elements that called for some form of media education. Media literacy components appeared most frequently in language arts and communication arts curricula. For example, Florida's Sunshine State Standards in language arts for grades 3-5 requires that the student "understands ... a variety of messages can be conveyed through mass media" (Florida Department of Education, 1998). In the communication arts area, one of the theatre standards for grades preK-2 requires that "the student understands context by analyzing the role of theatre, film, television, and electronic media in the past and present" (Florida Department of Education, 1998). The social science curricula followed language arts in terms of frequency of media education elements. Based on the results of a survey of teachers, Tuggle and his colleagues (Tuggle, Sneed, & Wulfemeyer, 2000) reiterated a call made 10 years earlier for media literacy to be part of the high school social science curricula. Health and consumerism curricula were third behind social science curricula in terms of frequency of media literacy components followed by media strands in fourth place (e.g., newspaper, yearbook, television production) (Kubey & Baker, 1999).

Further examples of media literacy around the nation are found in Minneapolis, where students receive media literacy grades on their report cards, and in North Carolina, where students in grades K-12 are required to learn to "access, analyze, evaluate and create media" (Darlington, 1996, p. 9E). Another example of media education that has

been in place for years is the Newspaper in Education program. "The Newspaper in Education program is a cooperative effort of newspapers and thousands of U.S. and Canadian schools where the newspaper is used as a tool of instruction" (ANPA, 1990, p. 1). The program helps students be informed citizens, develop critical reading skills, and foster personal growth. NIE provides educators a cost effective and exciting opportunity to use newspapers to teach students lessons in writing, history, math, and many other subjects (ANPA, 1990). A number of texts and guides, such as Using Newspapers to Teach Journalism and Using the Newspaper to Reinforce Reading and Writing Skills, have been written to help teachers use an ever present mass medium to help students learn. For example, teachers can use the sports and business sections of the newspaper to teach math skills or give current events quizzes to make students aware of their world. Teachers also can help students develop writing skills by having them choose an event in a poem, essay, or novel and write a newspaper article about the event (ANPA, 1990).

Research indicates that journalism courses help students do better in school (Dvorak, Lain, & Dickson, 1994; Robinson, 1996; The Freedom Forum, 1994). Dvorak et al. (1994) reported that journalism students do better in 10 out of 12 major academic areas, write better, and are active participants in extra-curricular and community activities. Dvorak and colleagues maintain that journalism courses are worthy of permanent status in the language arts curriculum.

> Students who took a class called "Journalism" found it superior in meeting well-recognized language arts competencies than did either required English courses or other English electives. These indications from academically superior students affirm the worthiness of Journalism as a course at the heart of the language arts curriculum, not to be relegated to distant or second-class or adjunct status within the English curriculum, and not to be squeezed out during times of budget crunch. (Dvorak et al., 1994, p. 49)

Moreover, with the face of media changing as the digital age evolves, journalism courses as well as others must incorporate lessons about and with new media. Katz (1996) suggests that children must have access to the technology and be taught to use it safely and responsibly and in a way that will serve a broader social purpose beyond entertainment. Media education is one way to meet the challenges set forth by Katz.

Media literacy is reaching the community through the "Family and Community Critical Viewing Project"[2] sponsored by the National PTA (Parent Teacher Association), Cable in the Classroom, and the National Cable Television Association (Considine, 1995). With the passage of the Children's Television Act of 1990 and the subsequent debate over how to enforce the requirements of the Act, more attention has been given to the types and amount of media messages children are exposed to on a daily basis.

New Mexico Media Literacy Project

New Mexico has been the leader in the media literacy movement in the United States. In 1993, the Downs Media Education Center (DMEC), with other supporters, funded the New Mexico Media Literacy Project (NMMLP) (Darlington, 1996). Hugh Downs of ABCs "20/20" and his daughter, Dierdre, founded the Downs Center. The Project is now sponsored by Albuquerque Academy[3] Outreach and supported by the New Mexico State Department of Education and public and private sources. The goal of

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[2] "The Family & Community Critical Viewing Project, a partnership of the National Parent Teacher Association, Cable in the Classroom, and the National Cable Television Association, provides free "Taking Charge of Your TV" workshops to help families view television carefully and critically. Since this nationwide initiative began in 1994, over 800 local cable operators, parents, and educators have been trained as presenters to give critical viewing workshops in their communities. . . . This project has the support of national education organizations including the National Education Association, the American Association of School Administrators, the National Association of Secondary School Principals, the National Association of Elementary School Principals and the National School Boards Association" (Cable in the Classroom, 1996, available http://www.ciconline.com/home.htm).

[3] Albuquerque Academy is a non-denominational, coeducational, independent day school for 1,000 students in grades six through twelve. It houses the New Mexico Media Literacy Project.

NMMLP is to make New Mexico the most media literate state in the nation and introduce the basic principles of media literacy to the state's population (New Mexico Media Literacy Project, 1998). The Project conducts media literacy workshops for students, teachers, and parents that train participants to become more aware of media practices and help them analyze media messages in a systematic and critical manner. The NNMLP also provides resources, including curriculum guides, videos, and CD-ROMs, to help teachers and parents develop and refine media literacy skills in children as well as themselves. The Project has been recognized by local and national media as one of the "state and nation's most successful community-based educational matching grant programs" (New Mexico Media Literacy Project, 1995b, p. 1).

Feedback about the NMMLP's effort to create a media literate citizenry has been positive. The Project's director, Bob McCannon, is essentially a media literacy salesperson, who travels the state giving workshops to public and private schools (Nissen, 1996). As part of McCannon's workshops and teacher training programs, "the concept of taking back our children's culture from the dominant media is resonating in New Mexico" (New Mexico Media Literacy Project, 1995b, p. 1). Those who hear the message realize that they, whether parents, teachers, churches, or media representatives, must reclaim from the media the task of teaching children lessons for life in their formative years and beyond (New Mexico Media Literacy Project, 1995b). Project members equate commercial television and other powerful media with strangers who come into the home and give thousands of hours worth of lessons on anti-intellectualism, gratuitous violence, addiction, and other anti-social values (New Mexico Media Literacy Project, 1995b). Media literacy exists to combat these "strangers."

National Media Literacy Efforts

On a national level, media literacy finds support from top government officials. U. S. Secretary of Education Richard Riley has said, "'young people need to stretch their minds and avoid being passive consumers ... Television is here to stay, and our young people need to become savvy and thinking people when it comes to understanding the media'" (Rubel, 1996). In her book, It Takes A Village, Hillary Clinton alludes to media literacy. She suggests that television affects what and how Americans think and argues for teaching children to watch television critically (Rubel, 1996).

The concern about how citizens think is at the heart of media literacy training. The objective of such training is to produce critical thinkers who can evaluate and analyze media messages. But, for teachers to train students to be critical consumers of the media, they must have specific objectives for their students and be trained themselves.

National Communication Association Standards for Media Literacy

The National Communication Association has recommended standards for teaching and learning about media literacy. The K-12 Standards for Speaking, Listening, and Media Literacy (National Communication Association, 1998) are the result of the call for a system of voluntary standards in the "core" subjects of English, math, history, geography and science by the National Education Goals Panel (National Education Goals Panel, 1992) as well as the national education reform legislation, "Goals 2000: Educate America Act." This act proposed the development of standards in several subjects, including communication (U.S. Department of Labor, 1991).

NCA made several assumptions about these standards. Acceptance by school administrators and teachers is voluntary; the standards are not a national curriculum; they serve as a framework for each state, school districts, or local schools to use to develop curricula; and the standards are not all-inclusive; rather, they provide the opportunity for necessary additions by each state, school districts, schools, and individual teachers (National Communication Association, 1998). These assumptions are important because they leave the decision about adopting and implementing the standards up to the individual states and their respective school districts. Such freedom and flexibility may be the catalyst to get other states and school districts to adopt the standards and help students become media literate.

NCA also provided guidelines for implementing these standards. It is clear that only those trained in the designated areas should be allowed to teach the specific skills and concepts associated with media literacy. Lack of training has been a problem for the media literacy movement from the start. Teachers who participated in the four "seed" projects in the late 1970s complained they did not know how to use the materials given to them. Today, with projects like NMMLP and workshops conducted by organizations like the National PTA and Cable in the Classroom, there should be more teachers (from all subject areas) qualified to teach media literacy skills. Training teachers from all subjects is in accord with NCA recommendations that the concepts and skills of media literacy be taught across the entire curriculum. NCA also recommends that teachers receive ongoing in-service training to help them create and adapt assignments to help foster students' communication competence (National Communication Association, 1998).

Evolution of Persuasion Research

In order to comprehend more fully the research questions and hypotheses guiding this study, it will be useful to review briefly the evolution of persuasion research in order to understand how the elaboration likelihood model of persuasion developed. This established model of persuasion developed out of years of media effects research that began with Walter Lippmann (1922) and Harold Lasswell (1927).

Early persuasion research suggested that mass media had direct effects on attitudes and behavior (Doob, 1935; Lippmann, 1922). However, much of the early research was based on anecdotal evidence and not empirical research (Petty & Priester, 1994). In the 1940s and 1950s there was a shift in media researchers' thinking. Evidence of an indirect effects model of persuasion began to emerge. The work of Hyman and Sheatsley (1947) suggested that persuasion could not be achieved by a mere increase in message flow; rather, effective message dissemination requires consideration of specific psychological barriers. Lazarsfeld, Berelson, and Gaudet's (1948) famous presidential campaign study found that media tend to reinforce existing attitudes as opposed to creating new ones. Katz and Lazarsfeld (1955) suggested the idea of a "two-step" flow of communication. They believed the media were not as powerful as early researchers had thought. Katz and Lazarsfeld (1955) argued that media tend to influence opinion leaders who in turn influence the general public. The studies of Carl Hovland also contributed to the indirect effects view of the media. Hovland, Lumsdaine, and Sheffield (1949) reported that military films had little effect on mass changes in attitude and behavior. Findings indicated a significant number of moderating variables that contributed to the persuasive power of the military films (Hovland et al., 1949). Subsequent research

focused on these moderating variables as contemporary models of persuasion were developed.

Over the years the attitude construct has been popular in social psychological research focusing on media influence (Petty & Priester, 1994). In essence, the concept of attitudes can be described as "peoples' general predispositions to evaluate other people, objects, and issues favorably or unfavorably" (Petty & Priester, 1994, p. 94). Attitude is important because it is believed to be a mediating variable for knowledge acquisition as well as behavioral change (Petty & Priester, 1994). Although a number of theories of attitude change have been developed over the years, the one that laid the foundation for the elaboration likelihood model is the communication/persuasion matrix model of influence elaborated by McGuire (1985, 1989). The model suggests that there are five inputs to the persuasion process. These include (1) source, (2) message, (3) recipient, (4) channel, and (5) context. The outputs involve (1) exposure, (2) attention, (3) interest, (4) comprehension, (5) acquisition, (6) yielding, (7) memory, (8) retrieval, (9) decision, (10) action, (11) reinforcement, and (12) consolidation (McGuire, 1989). While thorough, the communication persuasion matrix model is not complete.

Further research has shown that information processing does not have to be sequential as suggested by the model. Many of the steps may be completely independent of the others (Petty & Priester, 1994). For example, learning and comprehension can occur without attitude change and attitudes can change without learning of specific information (Petty, Baker, & Gleicher, 1991; Petty & Priester, 1994). Secondly, the model is deficient in explaining the factors that produce yielding, one of the outputs of the matrix model. While individuals may accept a persuasive communication based on

their exposure, attention, interest, comprehension, and acquisition of a message, it is not guaranteed that they will yield to it (Petty & Priester, 1994).

Greenwald (1968) and Petty, Ostrom, and Brock (1981b) developed the cognitive response theory in order to address these two drawbacks. Cognitive response theory suggests that the level of "yielding is related to the idiosyncratic cognitive responses (pro and counter-arguments) generated to the message rather than learning of the message, and persistence of persuasion is related to memory for these cognitive responses rather than the message per se" (Petty & Priester, 1994, p. 98).

However, the cognitive response theory only focused on individuals who were active message processors and failed to consider what happens when individuals do not actively think about the information they receive (Petty & Priester, 1994). Thus, Petty and Cacioppo (Petty & Cacioppo, 1981a; Petty & Cacioppo, 1986a; Petty & Cacioppo, 1986b) developed the Elaboration Likelihood Model of persuasion, which holds that there are two routes to persuasion, central and peripheral.

Elaboration Likelihood Model

The Elaboration Likelihood Model of persuasion has been tested in a number of empirical studies. The ELM posits that there are two routes to persuasion, a central route and a peripheral route (see Figure 2.1). The central route of persuasion is characterized by active cognitive processing and leads to attitude changes that are more enduring and predictive of future behavior (Cialdini, Petty, & Cacioppo, 1981; Petty & Cacioppo, 1980). The peripheral route is characterized by the attention given to positive and negative cues (e.g., source attractiveness, number of arguments) within the persuasion

context. Attitude changes tend to be temporary and unpredictive of behavior (Petty et al., 1983). The following review of the literature will examine the empirical research that has tested and validated the ELM.

Central Route of Persuasion

The central route to persuasion involves active cognitive processing of persuasive communications. This route of persuasion "views attitude change as resulting from a person's diligent consideration of information that s/he feels is central to the true merits of a particular attitudinal position" (Petty et al., 1983, p. 135). In other words, a person uses his/her prior knowledge and experience to scrutinize all of the relevant information in a message in order to evaluate the merits of the advocated position (Petty & Cacioppo, 1986a; Petty & Priester, 1994). An individual's motivation and ability to process information and generate favorable and/or unfavorable thoughts characterize the central route. Other characteristics include 1) cognitive justification of behavior different from existing attitudes (Cummings & Venkatesan, 1976; Festinger, 1957) and 2) understanding, learning, and retaining issue/product relevant information (Bettman, 1979; Hovland, Janis, & Kelley, 1953; McGuire, 1976).

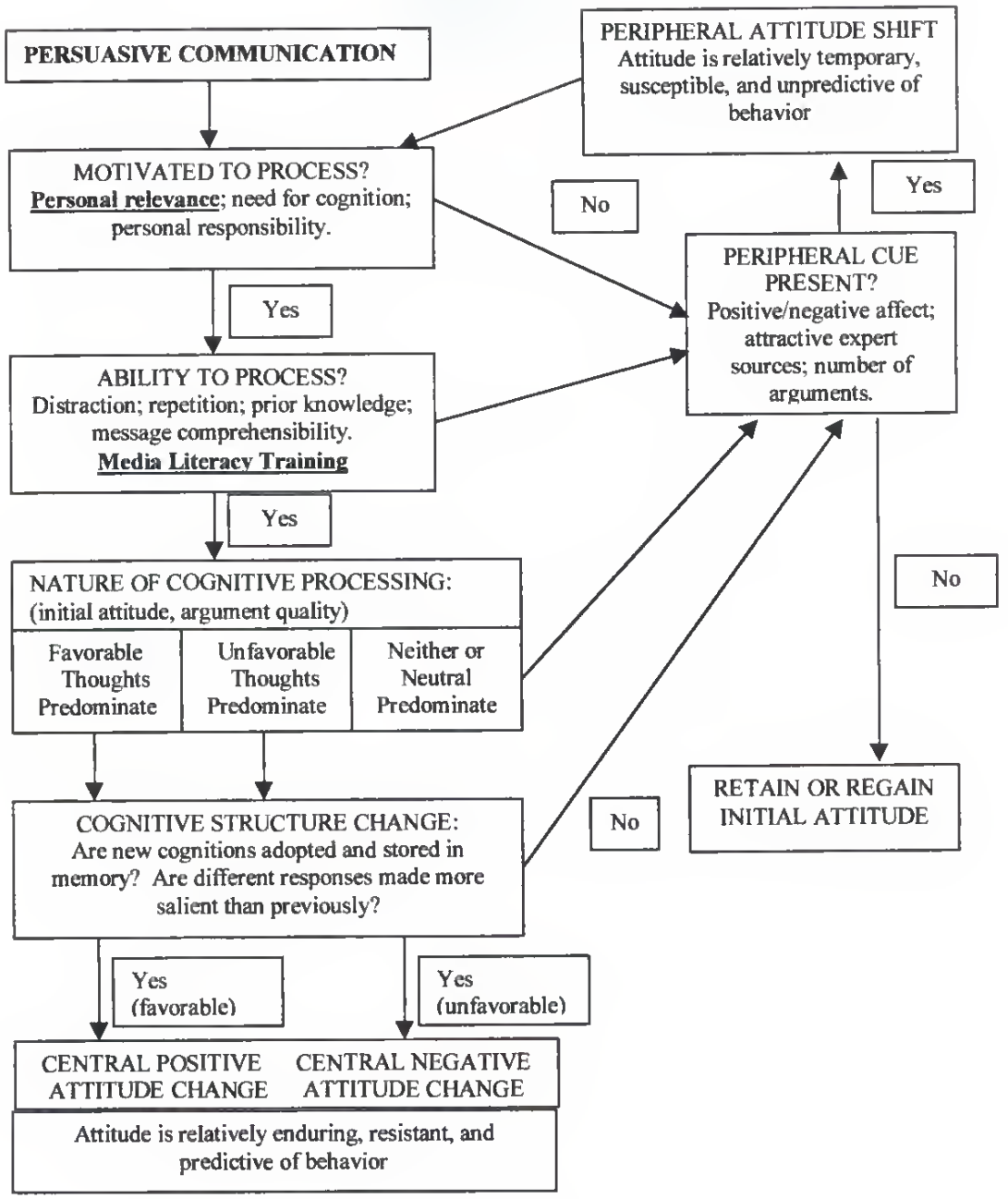
PERSUASIVE COMMUNICATION
PERIPHERAL ATTITUDE SHIFT
Attitude is relatively temporary, susceptible, and unpredictive of behavior
MOTIVATED TO PROCESS?
Personal relevance; need for cognition; personal responsibility.
No
Yes
PERIPHERAL CUE PRESENT?
Positive/negative affect; attractive expert sources; number of arguments.
Yes
ABILITY TO PROCESS?
Distraction; repetition; prior knowledge; message comprehensibility.
Media Literacy Training
Yes
NATURE OF COGNITIVE PROCESSING:
(initial attitude, argument quality)
Favorable Thoughts Predominate
Unfavorable Thoughts Predominate
Neither or Neutral Predominate
No
RETAIN OR REGAIN INITIAL ATTITUDE
No
COGNITIVE STRUCTURE CHANGE:
Are new cognitions adopted and stored in memory? Are different responses made more salient than previously?
Yes (favorable)
Yes (unfavorable)
CENTRAL POSITIVE ATTITUDE CHANGE
CENTRAL NEGATIVE ATTITUDE CHANGE
Attitude is relatively enduring, resistant, and predictive of behavior

Figure 2.1. Elaboration Likelihood Model of Persuasion (Petty & Cacioppo, 1986b).

Additionally, the central route is characterized by individual cognitive responses to external messages (Cacioppo & Petty, 1980; Greenwald, 1968; Petty et al., 1981b; Wright, 1980) and the way a person integrates issue/product-relevant beliefs into a summary evaluation (Azjen & Fishbein, 1980; Lutz & Bettman, 1977; Troutman & Shanteau, 1976). Careful processing leads to an attitude that becomes part of a person's belief structure. However, research has shown that considerable cognitive work does not imply the formation of rational or accurate attitudes (Petty & Priester, 1994). The key point is that careful and thoughtful evaluation of a persuasive message can change attitudes. Attitudes changed by the central route "have been found to be relatively accessible, persistent over time, predictive of behavior, and resistant to change until they are challenged by cogent contrary information" (Cialdini et al., 1981; Petty et al., 1980; Petty & Priester, 1994, p. 100-101).

Peripheral Route to Persuasion

The peripheral route of persuasion espouses that attitude change can occur without effortful evaluation of a message. A person's motivation and ability to process information are low along this route. This route relies on simple cues within the persuasion context to influence attitude change. These cues include, among others, source attractiveness, perceived expertise, and the number of arguments. Attitude change via the peripheral route of persuasion can be highly effective; however, research has shown that such attitude changes are "less accessible, less enduring, and less resistant to subsequent attacking messages" (Petty & Priester, 1994, p. 101) than carefully processed information (Petty & Cacioppo, 1986a).

Unlike the central route, attitude change along the peripheral route is not the result of an individual's consideration of the pros and cons of an issue; rather, it is the result of a person associating the attitude issue or product with positive or negative cues. Also, attitude change may result because a person makes an inference about the merits of the argued position based on simple cues within the persuasion context (Petty et al., 1983). For example, a person may accept an advocated position because he/she received good news before exposure to the persuasive communication.

The Role of Involvement

One of the most important variables that affect the amount of thinking about a persuasive message is personal relevance. High personal relevance tends to dictate the level of interest and motivation to process the message information. Several studies reported that an increase in personal relevance resulted in an increase in persuasion when strong arguments were used. However, when weak arguments were presented, the message was less persuasive than in the low relevance conditions (Burnkrant & Unnava, 1989; Petty & Cacioppo, 1979b).

Involvement as a determinant of argument-based persuasion

Petty, Cacioppo, and Goldman (1981) conducted an experiment to examine personal involvement as a determinant of argument-based persuasion. Undergraduates expressed their attitudes toward an issue after exposure to a mediated message with either strong or weak arguments from a source of high or low expertise. The communication had either high or low personal relevance to subjects.

The authors hypothesized that high personal relevance of a topic would lead to thoughtful consideration of the issue-relevant arguments in the message (i.e., the central

route). Low personal relevance would make peripheral features of the argument more potent (Petty et al., 1981a).

Although the central and peripheral routes to persuasion had received much support at the time, Petty et al. (1981a) pointed out that "attitude change is not determined exclusively by either issue-relevant argumentation *(central)* or simple cue association *(peripheral)*" (p. 848). Therefore, they suggested a closer examination of the differences between each route and an identification of variables that determine which route will be followed.

Personal involvement is one variable that influences how much consideration is given to issue-relevant arguments. For example, Cialdini, Levy, Herman, Kozlowski, and Petty (1976) found that subjects generated more supportive arguments in an anticipation of a discussion with an opponent when the attitude issue was of high personal relevance. Petty and Cacioppo (1979a, 1979b) reported that issues of high rather than low personal relevance generated higher correlations among subjects' message-relevant thoughts and message acceptance.

While high personal relevance tends to dictate subjects following the central route of persuasion, low personal relevance typically engages the peripheral route of persuasion. Johnson and Scileppi (1969) and Rhine and Severance (1970) found manipulation of source credibility had more impact under low involvement conditions than high. After exposing subjects to a message containing two or six arguments from a likable or dislikable source, Chaiken (1980) found that message manipulation impacted persuasion more under high involvement conditions. On the other hand, varying the

source had a greater impact under low involvement conditions. However, Chaiken's findings do not provide

> definitive support for the two routes to persuasion because the particular message manipulation employed by Chaiken (number of arguments) has the ability to serve as a simple cue much in the same way that a source manipulation (likable or dislikable source) can serve as a cue. (Petty et al., 1981a, p. 849)

Petty, Cacioppo, and Goldman's (1981a) study was designed to more directly test that under high-involvement conditions thoughtful message evaluation is the most important factor in persuasion, but under low-involvement conditions, peripheral cues have the most impact. Their formal hypothesis was that

> [u]nder conditions of high personal involvement, persuasion would be affected more by the quality of the message arguments employed but that under low-involvement conditions, persuasion would be tied more strongly to the expertise of the source. (Petty et al., 1981a, p. 849)

A 2 (issue involvement: high or low) x 2 (argument quality: strong or weak) x 2 (source expertise: high or low) factorial design was used to test the hypothesis. Subjects were exposed to radio broadcasts about potential policy changes at the University of Missouri. In order to create high involvement among subjects, half were told that the policy changes (comprehensive exam requirement for graduation) would be instituted the following year. The other half were told the changes would not take effect for 10 years, thus creating low involvement. Additionally, source expertise was varied among the subjects as well as argument quality. Strong arguments included statistics, data, etc. in support of the comprehensive exams. Weak message arguments relied on quotes, personal opinion, and examples. The messages contained eight arguments each and were equivalent in length (Petty et al., 1981a).

Two attitude measures were taken after the subjects listened to the radio broadcasts. Subjects were asked "to rate the concept of 'Comprehensive Exams' on four 9-point semantic differential scales (good/bad, beneficial/harmful, foolish/wise, and unfavorable/favorable)" (Petty et al., 1981, p.850). Subjects were also asked to rate the extent of their agreement with the proposal for comprehensive exams on an 11-point scale (1-do not agree at all and 11-agree completely). These attitude measures were converted and averaged into an index of attitude toward comprehensive exams. Subjects also rated the quality of the broadcast and the announcer in order to maintain the cover story. They answered three questions to evaluate the effectiveness of the manipulations. Furthermore, subjects were given four minutes to list as many arguments from the message they could recall. Independent coders blind to the experimental manipulations rated each argument listed for accuracy ($r = .92$).

Findings suggested that under certain circumstances factors other than message content, like source credibility and attractiveness, might be more important as determinants of persuasion. Results indicate that a persuasive message high in personal relevance is effective because of the cogency of its arguments. However, persuasive messages low in personal relevance were effective because of peripheral cues. Given the results, Petty and his colleagues suggested that issue-relevant argumentation and peripheral cues must be examined to determine the path to persuasion. "Each type of persuasion occurs in some instances, and the level of personal involvement with an issue appears to be one moderator of which type of persuasion occurs" (Petty et al., 1981a, p. 853).

The authors offered two reasons why increased personal relevance might be associated with increased reliance on message arguments for persuasion. First, there is greater motivation to form a reasoned opinion when personal interests are high. Individuals tend to scrutinize arguments about a highly personal issue more thoroughly than issues low in personal relevance. Few people want to do the cognitive work necessary to evaluate message arguments when the issue is not relevant to them (Petty & Cacioppo, 1981b).

Besides motivation, ability is a second reason personal relevance might be associated with increased message evaluation. The authors suggest that people tend to have a better schema for thinking about things relevant to them. Thus, people may have a greater ability to process messages relevant to them (Petty et al., 1981a).

The authors conclude that there are two distinct routes to persuasion and "that these routes are characterized by different antecedents and consequents" (Petty et al., 1981a, p. 854). They suggested that future work examine other potential moderators of the route to persuasion. This suggestion is a catalyst for the present study.

The moderating role of involvement

Petty et al. (1983) conducted an experiment to test the moderating role of involvement in the ELM. Over 150 male and female undergraduates at the University of Missouri-Columbia were randomly assigned to each of the cells in a 2 (high vs. low involvement) x 2 (strong vs. weak argument) x 2 (celebrity vs. non-celebrity status) factorial design. Subjects were told they were part of a study concerning the evaluation of magazine and newspaper ads conducted by the psychology department and journalism school (Petty et al., 1983).

Subjects were presented with two booklets. The first contained instructions and advertisements. The second was a questionnaire booklet. Each booklet varied on level of involvement, argument quality and peripheral cue (Petty et al., 1983).

Involvement was manipulated by offering a free gift to the subjects for their participation. To establish high involvement, subjects were offered a disposable razor, which happened to be the brand advertised in one of the ads in the booklet. Additionally, subjects were told that the razor and advertisement would be test marketed in Midwestern cities, including their own. Low involvement was established by offering a brand of toothpaste not advertised in the booklet. To further establish low involvement, subjects were told the razor and advertisement would be test-marketed on the East Coast. Thus, high involvement subjects were led to believe they would make a decision about a product in the experiment and that the product soon would be available in their area. Low involvement subjects were led to believe they would not have to make a decision about razors in the experiment and that it would not be available in their area in the foreseeable future (Petty et al., 1983).

Argument quality was either strong or weak. The strong arguments ad suggested the razor was "scientifically designed" and listed five statements about the razor (e.g., "Handle is tapered and ribbed to prevent slipping"). The weak arguments ad characterized the razor as "designed for beauty" and listed five statements about the product (e.g., "Floats in water with a minimum of rust") (Petty et al., 1983).

Celebrity and non-celebrity endorsements were used to vary the peripheral cue. Celebrity endorsed ads featured famous golf and tennis athletes. Non-celebrity ads featured average looking people unfamiliar to the subjects (Petty et al., 1983).

The questionnaire booklet contained the dependent measures. On the first page, subjects were asked to list all the product categories that were advertised and asked to recall the brand name of the products in each category. The second page asked subjects to select the correct brand name from seven choices and match it with one of the 12 product category descriptors. These brand recall and recognition measures were used for "their practical importance and for purposes of comparison with the attitude data" (Petty et al., 1983, p. 139).

After responding to questions about one of the legitimate ads in the booklet, subjects answered questions about the crucial Edge razor ad. These questions were placed early in the booklet to avoid subject fatigue and boredom and achieve maximum manipulation effectiveness. Subjects responded to questions about purchase intentions and their overall impression of the product. These measures were averaged into a general positive or negative attitude toward the product (Petty et al., 1983).

Next, subjects answered questions consistent with the cover story and then were instructed to list all their thoughts while they examined the Edge ad. This thought listing activity was designed to be a "cognitive response" measure; however, subjects did not list many thoughts about the product. Results indicated this measure was unaffected by the manipulations. The authors suggest that the measure may have been more sensitive if it had been administered immediately after exposure to the Edge ad (Petty et al., 1983).

Findings indicate that manipulation of argument quality influences attitudes to a greater degree when involvement is high. Manipulating the product endorser resulted in a greater impact on attitudes under low involvement conditions rather than high. These

results are consistent with the ELM and confirm there are two distinct routes to persuasion (Petty et al., 1983).

Forewarning of subjects

Petty and Cacioppo (1979a) studied the effects of forewarning subjects of the persuasive intent of a communication under high and low involvement conditions. Foreknowledge of persuasive communications can take two forms (Papageorgis, 1968). "Persons may be forewarned of a) the topic and position of an impending communication, or b) the communicator's persuasive intent" (Petty & Cacioppo, 1979a, p. 173). The researchers' hypothesis, which was based on reactance theory (Brehm, 1966), suggested that the reactance to foreknowledge of persuasive intent would affect how the message was processed. Without forewarning, the communication would be accepted on its own merits. With forewarning, subjects would be motivated to counter-argue the communication (Petty & Cacioppo, 1979a). Petty and Cacioppo (1979a) believed the greater the personal relevance of the attitude under attack, the greater the reactance to the communication and the greater the inhibition of persuasion.

Subjects were placed in two groups (warned of persuasive intent or not). Within each group subjects experienced one of three involvement levels (one high and two low). Subjects read booklet covers that either warned them of the impending persuasive communication or not. Subjects then listened to three-minute radio editorials that argued for the requirement of senior comprehensive exams in one's major before graduation. The researchers manipulated high involvement by providing an introductory paragraph in the editorials that stated the comprehensive exams were to be instituted with the upcoming graduating class. Thus, the subjects were likely to be affected personally. The

two low involvement conditions used a paragraph that stated the exams would begin in 10 years or they would begin with the upcoming graduating class, but at another college. Thus, the personal relevance of the editorials was greatly reduced (Petty & Cacioppo, 1979a).

After hearing the editorials, the subjects expressed their attitudes toward the proposed policy change on an 11-point Likert-type scale. Subjects also listed their thought and ideas about the radio editorial and rated them as positive, negative or neutral (i.e., in favor of the exams, opposed, indifferent). Additionally, subjects completed ancillary questions and attempted to recall all message arguments (Petty & Cacioppo, 1979a).

The results confirmed Papaeorgis' suggestion that forewarning of persuasive intent inhibits attitude change more for issues of high than low involvement. Additionally, Petty and Cacioppo's hypothesis that forewarnings of persuasive intent on issues of high involvement inhibits persuasion by producing counter-arguments, which is based on reactance theory, was also confirmed. Forewarning of persuasive intent inhibits persuasion on highly involving issues by producing counter-arguments, not only before the message (Petty & Cacioppo, 1977), but during message presentation (Petty & Cacioppo, 1979a).

Interestingly, in the absence of forewarning, high involvement subjects tended to show more attitude change than low involvement subjects (Petty & Cacioppo, 1979a). Petty and Cacioppo suggest that increased personal relevance produces more critical message processing. However, when forewarning is introduced, the nature of information processing changes because subjects become less objective and more intent

on finding problems with the arguments presented as a way of reasserting their attitudinal freedom (Petty & Cacioppo, 1979a). Higher correlations were found for attitude under high rather than low involvement conditions and under warned rather than unwarned conditions. "This suggests that both involvement and warning increase the importance of message relevant cognitions in producing persuasion" (Petty & Cacioppo, 1979a, p. 176).

Child Development Literature

Swiss psychologist Jean Piaget (1896-1980) is one of the most influential researchers in the area of cognitive development. His developmental stages have been used time and again to explain and categorize children's mental and physical growth. Piaget's work in cognitive development suggests that children learn by what they do; however they must be ready to move to the next level of learning. Moving children through the steps necessary to get them to where they need to go can create readiness. It is clear from Piaget's work that children tend to follow an established pattern of development. Communication researchers have applied and tested the ideas set forth by Piaget and other psychologists and educators through numerous research studies. Understanding which age group possesses the necessary cognitive skills to process and evaluate persuasive messages will provide vital information for the design of this study. Therefore, a brief review of theories about child development as it relates to television is essential to this study.

Jean Piaget and Cognitive Development

Before examining the developmental literature as it relates to communication it is useful to summarize Piaget's theory of cognitive development. Having a working

knowledge of Piaget's ideas will provide a foundation on which to build. Piaget (1983; Piaget & Inhelder, 1964) and other stage theorists believe there are distinct qualitative stages of child development. This is in contrast to learning theorists who suggest there is a step-by-step quantitative process of acquiring knowledge[4].

According to Piaget, the various stages are achieved as children mature. Maturation and readiness (i.e., the capability of learning with relative ease) are key to children developing the skills that help them acquire and organize knowledge. Piaget believed physical action and experience with the environment were important for learning. He also believed in the importance of schemata, which are the basic units of cognition, speech, and behavior. Examples include sensorimotor, cognitive, and verbal schemata. Sensorimotor schemata refer to things like walking and opening doors; cognitive schemata refer to concepts, images, and the ability to reason from causes to effects; and verbal schemata refer broadly to communication skills. Schemata in newborn infants are simple reflexes; however, new schemata develop quickly and coordinate into larger schemata. For example, grasping schemata are the coordination of acquired schemata such as the abilities to, first, focus on an object, and, second, determine if the object can be grasped or not.

According to Piaget, schemata are modified through the constant process of adaptation, which is achieved via assimilation, accommodation and equilibration. Adaptation is an on-going process that helps individuals learn to predict and control their environment as they develop additional schemata through interactions with their

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[4] Learning theorists, like Bloom (Bloom, Englehart, Furst, Hill, & Krathwohl, 1956), Gagne (1977), and Briggs (Gagne & Briggs, 1979), have developed typologies that classify types of learning based on differences in what is being learned. These typologies suggest that specific types of learning take place within each category.

surroundings. Individuals accommodate, or change, their behavior when they encounter new experiences by developing new schemata or adapting existing schemata to the new situations. They assimilate by transferring established schemata to new situations. Accommodation and assimilation exist in every behavior. Individuals also try and maintain a sense of equilibration, or balance, as they explore and attach order and meaning to their daily experiences (Good & Brophy, 1990).

According to Piaget's theory, development is divided into four basic periods: "1) sensorimotor (birth to eighteen months), 2) preoperational (eighteen months to seven years), 3) concrete operations (seven to twelve years), and 4) formal operations (twelve years and beyond" (Good & Brophy, 1990, p. 72). Schemata development is characterized by sensorimotor skills in the sensorimotor stage, while the preoperational stage moves into thought and imagery. Classification skills, negation, identity, reversibility of operations, and reciprocity develop in the concrete operations stage. The period of formal operations is highlighted by the use of symbols, abstractions, and propositions contrary to fact.

Developmental Differences Among Children

Attention. Attention level is based on more than just aural and visual stimuli. The nature of the stimulus and its complexity dictate attention level. Studies show that children pay attention to the formal features of television (e.g., program pace, cuts, sound effects, presence of dialogue) as well program content (Huston, Greer, Wright, Welch, & Ross, 1984; Huston & Wright, 1983). Huston and Wright (1983) suggested that formal features signal what content is forthcoming, and such features serve as the syntax and grammar of program content.

Age differences exist in attention to formal television features. Animation, peculiar voices, upbeat music, rhyming, auditory changes, and sound effects appeal to younger children (Anderson & Levin, 1976; Calvert & Gersh, 1987). Older children do not rely on such salient features unless they are informative; they tend to depend on learned signals (Calvert, Huston, Watkins, & Wright, 1982). For example, older children learn that the end of a dramatic show is when revelations are made and problems are resolved. They understand that the last part of the program is the time to really pay attention.

As children's experience with television increases, the cognitive demands of a show grow in importance (Van Evra, 1998). Wright and colleagues (1984) noted that salient features are important, especially to young viewers, in establishing initial attention, which is based largely on perception. These formal features become less important as cognitive skills develop and experience with television increases. Zuckerman, Ziegler, and Stevenson (1978) noted that despite a lower attention level older children grasp television content as accurately as young viewers do. Research suggests that older children are using more active and schematic processing and selectively attending to what they perceive is important for processing (Wright et al., 1984). This explains why older children do not need to pay attention as much as young viewers. Their ability to process information is more sophisticated, so they can attend to the most important elements and still accurately interpret what is happening on the program. "These data run counter to the idea that children passively absorb television information, and they suggest that children's cognitive processing abilities and strategies are active and

fairly sophisticated" (Anderson & Smith, 1984; Pezdek & Hartman, 1983, cited in Van Evra, 1998, p. 6).

Comprehension. Numerous researchers have found developmental differences among children in terms of children's understanding television (Dorr, 1980; Hayes & Kelly, 1984; Young, 1990). For instance, three-year olds believe television characters are real; they lack the ability to understand narrative or dramatic structure; and they don't understand sarcasm and irony (Van Evra, 1998).

Children's comprehension levels vary depending on age. Young children's understanding of a television program and recall of program content are adversely affected by an inability to associate cause and effect events (Hayes & Kelly, 1984). For example, a five-year old watching "Beavis" and "Butt-head" play with fire does not associate lighting a match with the destruction of property. Children also have a difficult time distinguishing between program content and commercials and real and imaginary characters (Canadian Association of Broadcasters, 1985). Of course, some programming practices, like bringing an action figure to "life," make distinguishing between real and TV life more difficult (Dorr, 1980).

According to a study of children's comprehension of temporal aspects of content by Calvert (1988), 10-year old children were better able to understand flashbacks than six-year olds. Calvert concluded that formal features, like flashbacks, influence children's understanding of time-ordered concepts presented on television. Hirsch and Kulberg (1987) found age to be a factor in accuracy of temporal judgments. Children underestimated the length of 45-second segments and overestimated 15-second segments. According to the study, children, especially preschoolers, who watched less television

overall tended to make more accurate estimates. Thus, the more television a child watched, the more mistakes he/she made in estimating time length. Older children made more accurate estimates despite the amount of television watched. Hirsch and Kulberg (1987) suggested that the age of a child and amount of TV viewing during preschool are key factors that influence children's ability to make temporal judgments.

Spontaneous organization and integration of plot information is beyond the capability of most children, and those younger than 7 or 8 rarely grasp abstract lessons embedded in some shows (Christenson & Roberts, 1983). Rubin (1986) suggested that preoperational children rely on perception to guide their behavior; thus, their judgments are based on perceived appearances and the immediate environment. However, by age 7 or 8 changes occur and conceptual and symbolic skills develop. These help youngsters mediate television content and understand the complexities of television portrayals better (Rubin, 1986).

Hoffner and Cantor (1985) point out that young children rely on more perceptual features and information (e.g., personal appearance) than conceptual information and actual behavior when watching programs. Thus, they often misinterpret important information. Additionally, children's comprehension of social interaction on television is influenced by their ability to understand certain character depictions (Babrow, O'Keefe, Swanson, Meyers, & Murphy, 1988). Their ability to comprehend television characters' social interaction is largely based on their own interpersonal experience (Van Evra, 1998).

Retention. Differences in retention levels among children are due to developmental level as well. Recall is greatest for verbal encoding of auditory input, but

such encoding is an age-related skill not available to young children. They rely more heavily on visual input; therefore recall of auditory information is poorer (Van Evra, 1998).

Researchers have found that format variables involved in various media affect younger children more than older ones. Meringoff, Vibbert, Char, Fernie, Banker, and Gardner (1983) reported that preschooler's memory of figurative language improved greatly after a story was read to them as compared to watching a television story. However, Meringoff et al. (1983) noted that older children remember language from television as well as they do from stories; although, older children may be more sensitive to language delivery than younger ones.

Oyen and Bebko (1996) compared the performance of 4- to 7-year olds on a memory task that was either embedded in a computer game or given via simple instructions. Although significantly more rehearsal time was observed in the game context, the difference between groups was not so large when covert rehearsal was included in the comparison. Rehearsal in either context led to greater recall, but those playing the game remember less than those following simple instructions. Conclusions suggested that the games, although interesting, may have distracted the subjects and made the memory task more difficult because of competing goals. The authors explained that changes in task and interest value do not necessarily lead to spontaneous rehearsal in children who do not want to remember the information (Oyen & Bebko, 1996).

Children, 5- to 8-years old with advanced story schema skills, processed information with less effort, had better memory recall for central content, and demonstrated a higher level of attention and memory coordination in a study by

Meadowcroft and Reeves (1989). Beagles-Roos and Gat (1983) found that younger children develop basic television skills early, but general cognitive skills become more important as time passes.

Although effective learners process information via visual recognition and verbal encoding, it is older children who process, encode, and remember language more easily (Van Evra, 1998). Beentjes and van der Voort (1993) found that children learned more from television stories than print stories. Interestingly, television stories and print stories were recalled equally when immediate recall was tested; however, television stories fared better than print stories on delayed tests.

Age-differences also exist for type of material that is recalled. Hayes and Casey (1992) reported that preschoolers mention of the emotional states of characters on "Sesame Street" and "The Cosby Show" made up less than 1% of the reactions recalled after viewing. Recognition of affective states lasted longer for human portrayals than for Muppet shows and cartoons. The children also described basic emotions more accurately than complex ones. Despite verbal labels, the preschoolers did not remember the emotional states of the Muppets or cartoon characters, nor did they mention the physical states of the characters in retelling the stories (Hayes & Casey, 1992).

Winn (1985) noted a significant age-related difference among children and adults in terms of the television viewing experience; it is the background of actual experiences one can bring to television viewing. For children, television is a primary activity, and they do not have a vast amount of experiences, fantasies, and relationships to shape their viewing experience like adults do. Often, real-life experiences evoke memories of

television content for young children rather than the reverse, which is the case for adults (Winn, 1985).

Although much of the literature suggests that young children remember little of what they see on television, it is necessary to identify the measures used to assess their retention. Young children tend to perform better on tests of recognition than on ones of recall, and several researchers have reported that older children recall more of television content than younger viewers (Meringoff, 1980; Odom, 1972; Roedder, 1981). Therefore, younger children who focus on visual stimuli are at a disadvantage when open-ended recall measures are used. Previous research might yield different results for young viewers' recall performance if these studies substitute recognition measures for recall measures (Van Evra, 1998). Such findings were reported by Hayes and Kelly (1984) when a recognition measure was used in place of a recall measure to assess retention of visual material. Moreover, Cullingsford (1984) explained that recall, unlike recognition, is a voluntary process. He suggested that children recognize a lot about television because of repetition and familiarity, but they recall little.

Children and Advertising

Since the focus of this study is to determine the role of media literacy training in children's understanding of persuasive messages (i.e., television advertisements), it is necessary to discuss the literature relating to children and advertising. Although a review of all the children and advertising literature is beyond the scope of this investigation, a brief discussion of the relevant research on children and advertising follows.

Martin (1997) conducted a meta-analysis of children's understanding of the intent of advertising and found several study characteristics that have produced varying results in previous research. The meta-analysis examined studies that addressed these questions: "What is a commercial?" and "Why is a commercial on television/What is a commercial trying to do?" (Martin, 1997). Twenty-one articles met the criteria and were included in the meta-analysis. Although most studies suggest a positive relationship between age and children's understanding of the intent of advertising, it is not clear which factors impact the strength of the relationship.

Young (1990) classified the research on children and advertising into two categories with several subcategories:

1. Cognitive processes activated as a result of watching and listening to advertising
   a. attention to advertisements
   b. ability to distinguish between advertising and programs
   c. understanding of ad intent
   d. interpretation of advertising content
   e. memory for advertisements (recognition and recall, awareness of advertisements)
   f. other processes involved (cognitive mediators)
2. What the child does with the information processed
   a. effect on knowledge, attitudes, and values
   b. effect on other people (e.g., parents)
   c. effect on choice/consumption behavior or other types of behavior (e.g., antisocial behavior) (cited in Martin, 1997, p. 206).

Young's (1990) breakdown of the children and advertising literature is useful because it provides a clearer picture of the numerous areas of research that have been explored. The present investigation is concerned with both categories set forth by Young. The first category involves cognitive processing of messages. This study will focus on the sub-categories of children's understanding of ad intent, their interpretation of ad content, and other cognitive mediators (i.e., media literacy training). The second

category deals with what the child does with the processed information. The focus within this category is the sub-category of effects on attitudes.

In her meta-analysis, Martin (1997) focused on the relationship between age and understanding of ad intent and examined potential moderator effects. These moderator effects included measurement of children's understanding of the intent of advertising, type of intent assessed, type of ad exposure, publication year, and publication type. The first three moderator effects are most relevant to the present study; publication year and publication type will not be discussed.

Verbal assessments, including personal interviews (Macklin, 1983) and written questionnaires (Boush, Friestad, & Rose, 1994), have been the primary means of measuring children's understanding of advertising's intent (Martin, 1997). However, there is some question about children's ability to articulate their understanding about ad intent. This task may be too difficult for kids (Macklin, 1987). Other studies have assessed children's understanding through nonverbal tasks, like pointing at pictures to demonstrate understanding (Donohue, Henke, & Donohue, 1980; Kunkel, 1988; Macklin, 1987). Children's inability to articulate their understanding of ad intent has led to the conclusion that they do not understand the intent of advertising intent. This is problematic because they may understand but cannot explain it (Macklin, 1987).

In terms of understanding the intent of advertising, Martin's (1997) meta-analysis revealed a significant difference between the effect size for verbal assessment and the effect size for nonverbal assessment. Results indicate that it is problematic to draw conclusions from the entire set of studies because several study characteristics, especially differences in methods, moderate the relationship between age and understanding of ad

intent (Martin, 1997). The findings suggest nonverbal assessments tend to be more appropriate for younger children than verbal assessments. Nonverbal measures appear to reveal understanding of ad intent that was previously undetected (Martin, 1997).

According to Martin (1997), the literature distinguishes between an informational function of advertising and a persuasive function. The informational function simply lets the audience know the products are available in the store (Macklin, 1987). The persuasive function is more complex and requires an understanding of four attributes. Audience members must 1) understand the message source has other interests and perspectives; 2) realize the source intends to persuade; 3) understand persuasive messages are biased; and 4) realize biased messages must be interpreted differently than informational messages (Macklin, 1987; Roberts, 1982). Robertson and Rossiter (1974) made similar distinctions. They suggested there are two types of attributional intent: 1) assistive (i.e., ads inform us) and 2) persuasive (ads encourage us to buy products). Other types of intent identified by Blosser and Roberts (1985) are the intent to inform, teach, entertain, sell, and persuade.

Despite the differences put forth by Blosser and Roberts (1985), Martin (1997) found that much of the literature equated selling intent with persuasive intent. She noted that little empirical evidence exists to support differences between informational intent and persuasive intent. Her meta-analysis focused on the distinctions between persuasive/selling intent and informational/assistive intent (Martin, 1997).

Results indicate a significant difference in effects sizes for persuasive/selling intent and informational/assistive intent. Martin (1997) suggests that across age groups, children tend to understand the informational/assistive intent of advertising better.

Robertson and Rossiter (1974) explained that "persuasive intent, as would be clearly surmised, is a higher order of attributional sophistication and is dependent upon maturational development and, by implication, cumulative exposure to television commercials" (p. 17). It is clear that children, even young ones, better understand the informational concept that commercials tell them about things, and their ability to comprehend the persuasive concept of advertising depends on their age (Martin, 1997).

Type of ad exposure has varied among the studies measuring children's understanding of the intent of advertising. Some studies (e.g., Ward, Wackman, & Wartella, 1975, 1977) do not expose children to commercials or programming. They simply ask general questions about children's understanding of ad intent via surveys or personal interviews. Other studies (e.g., Rubin, 1974) have exposed children to a series of commercials only or to commercials and other programming. Still others (e.g., Stutts, Vance, & Hudleson, 1981) exposed children to commercials imbedded in other types of programming. Martin (1997) suggests that "the type of ad exposure (i.e., "no ad," "ad only," or "ad mixed"--advertisements and other types of programming) may moderate the strength of the relationship between age and understanding of ad intent" (p. 207). Seeing an advertisement may help subjects explain more clearly the intent of advertising than not seeing an ad. Moreover, seeing an ad in an unnatural setting with few distractions may cue subjects to the ad's informative or persuasive intent. Meta-analysis results indicate that type of exposure before measurement of understanding of ad intent does, indeed, affect the level of understanding shown by children (Martin, 1997).

According to Martin (1997), further research must explore children's understanding of the distinction between informational/assistive intent and

persuasive/selling intent. Martin argues that conceptually the two types of intent lie on a continuum, with informational intent requiring a lower level of understanding and persuasive intent requiring a higher level of understanding. Her meta-analysis reveals that the research has not treated them as such (Martin, 1997). Roberts (1982) argued that children's understanding of advertising intent is based on their perspective. If they approach advertising from the consumer's perspective, then they see its intent as informational (i.e., show products that are available for purchase). If they approach advertising from the advertiser's perspective, then they understand advertising is a way to persuade the audience to buy products so the advertiser can make a profit (Martin, 1997).

Martin (1997) also argued for further development of reliable nonverbal measures to assess children's (especially younger children's) understanding of ad intent. Macklin (1987) questioned those studies (Donohue et al., 1980; Macklin, 1985) that claimed to measure persuasive/selling intent via nonverbal measures. Asking kids to point to what the Trix Rabbit wants them to do may not accurately assess their understanding of advertising's selling intent (Macklin, 1987). Martin (1997) suggested that researchers "...continue to develop nonverbal measures with the goals of determining whether these tasks are ascertaining informational/assistive intent, persuasive/selling intent, or some other type of information, and the extent to which the results are affected by the nature of the task" (p. 214). Furthermore, additional verbal assessment measures should be developed (Martin, 1997).

Attitude Toward Advertisements

While the focus of this investigation is to determine changes in attitude toward selected, high-involvement products, it is also necessary to understand that subjects may develop an attitude toward the actual advertisement that could influence their attitudes toward the products. Therefore, it is useful to examine briefly some of the work that has been done in the area of attitude towards advertisements (Haley & Baldinger, 1991; Holbrook, 1978; Mitchell & Olson, 1981; Shimp, 1981).

A Meta-Analysis

In their meta-analysis of pairwise relationships involving attitude toward advertisements, Brown and Stayman (1992) found that a number of methodological variables moderate the strength of relationships among the research studies focusing on ad attitudes. Results also provided support for the indirect influence of ad attitudes on brand attitudes via brand cognitions (Brown & Stayman, 1992).

This meta-analysis offered several insights into the effects of ad attitudes. The aggregated study effects showed a significant relationship between ad attitudes and constructs such as feelings, ad-related cognitions, brand-related cognitions, brand attitude, and purchase intentions. A notable result was that even in studies where ad attitude was not the central focus, relationships involving ad attitudes remained strong. Thus, ad attitude plays an important role in explaining advertising effects (Brown & Stayman, 1992).

Brown and Stayman's (1992) study also supported the dual mediation model (Lutz et al., 1983), "which posits a direct effect of ad attitude on brand attitude as well as an

indirect effect via brand cognitions" (p. 46). However, the results suggest the indirect path may be more important than previously thought (Brown & Stayman, 1992).

Moderator analyses yielded useful findings. Although Peter and Churchill (1986) suggest that multiple-item scales should be more reliable for measuring ad attitude, results indicated that multi- versus single-item scales had little effect on average correlations. Significance was found only for ad attitude and brand attitude relationships. Additionally, student samples were found to produce large effects sizes, especially between ad attitude and feelings and ad-related cognitions. This possible upward bias in effects sizes led the authors to caution against generalization to other populations (Brown & Stayman, 1992).

Product-related moderator variables affected ad attitude relationships in different ways. Use of novel brands in studies tended to produce stronger relationships between ad attitude and brand attitude and purchase intentions. Familiar brands tend to weaken the impact ad attitudes can have on such outcomes (Brown & Stayman, 1992).

Stronger relationships existed between ad attitudes and feelings and ad attitude and brand cognitions when products other than consumer nondurables were used in the studies. The authors suggested that increased involvement with services and higher-priced durable products (e.g., automobile, and refrigerator) might account for the stronger relationship. Brown and Stayman (1992) concluded that mixing product types within studies might help reduce biasing effects of product type and allow for more accurate generalizations.

Other moderator variables that affected ad attitude relationships included subjects' processing goals (i.e., advertising medium, whether ads were imbedded in other

material, and whether subjects were instructed to attend to the ad). "As expected, these variables had different effects on the feelings and ad attitude relationship than they had on the cognitive and behavioral outcomes of ad attitudes" (Brown & Stayman, 1992, p. 47). Increased cognitive elaboration, which typically occurs with print ads, the nonimbedded ad, and instructions to pay attention to the ad, resulted in smaller effects of feelings on ad attitude. However, such conditions produced "higher correlations between ad attitudes and the downstream constructs of brand cognitions, brand attitudes, and purchase intentions" (Brown & Stayman, 1992, p. 47). Such findings support earlier results (Madden, Allen, & Twible, 1988) and "strongly suggest that processing goals that enhance cognitive responses may inhibit affective responses" (Brown & Stayman, 1992, p. 47).

A test of study design as a moderator of ad attitude relationships yielded significant findings. Significantly larger effects sizes for the ad attitude and brand attitude relationship were produced by within-subjects designs. Substantially large effects sizes were also found for the ad attitude and purchase intention relationship. The within-subjects design produced the opposite effect on the ad attitude and feelings relationship (Brown & Stayman, 1992).

The authors concluded that strong relationships exist between ad attitude and other variables; however, these relationships vary according to several methodological factors (i.e., subjects' processing goals, product-related variables, study design). Furthermore, ad attitude influences advertising effectiveness via paths, especially the indirect path, set forth in the dual mediation model (Brown & Stayman, 1992).

Affective Reactions on Attitudes Toward the Advertisement

Brown and Stayman's (1992) meta-analysis offered considerable support for the notion that attitude toward the ad is a predictor of brand attitude. However, the stream of research examined in the meta-analysis dealt mainly with evaluative judgments. Other researchers have examined the significant contribution of affective responses on ad attitudes. Batra and Ray (1986) were one of the firsts to report the influence of affective responses on ad attitudes. Stayman and Aaker (1988) demonstrated that the affective responses of warmth, amusement, and irritation could affect attitude toward the brand without affecting ad attitudes. Edell and Burke (1987) reported that feelings created by the actual advertisement are, by themselves, useful in explaining advertising effects. Such affective reactions are more than an additional measure of subjects' evaluation of advertisements. According to Edell and Burke (1987), when semantic judgment scales (evaluation, activity, gentleness) were combined with feelings (upbeat, negative, warm) in a regression analysis, results indicated a unique contribution of feelings to ad attitude, brand attitude, and beliefs about the brand attitudes. Burke and Edell (1989) noted the importance of feelings on ad-based affect and cognition. They examined the relationships among feelings elicited by "new television ads for unfamiliar products, judgments of the ads' characteristics, brand attribute evaluations, attitude toward the ad, and attitude toward the brand in a simultaneous equation model" (Burke & Edell, 1989, p. 69). Findings indicated that feelings directly and indirectly affect ad and brand attitudes (Burke & Edell, 1989). While the aforementioned studies (Batra & Ray, 1986; Edell & Burke, 1987; Stayman & Aaker, 1988), used laboratory settings and verbal measures to

assess the impact of affective reactions on attitudes toward the ad and the brand, Derbaix (1995) used more natural settings and included facial expression measures.

Derbaix (1995) investigated the impact of affective reactions produced by television advertisements on the following variables: attitude toward the advertisement and postexposure brand attitude. The study was conducted in a natural setting (waiting room) using a real program and real commercials for known and unknown brands. Affective reactions were measured through facial expressions and traditional verbal measures. Verbal measures indicate that affective responses contribute to ad attitude and postexposure brand attitude, but facial measures do not. Findings show that unfamiliar brands are more influenced by verbal affective reactions generated by the advertisement. The author concludes that the nonverbal measure of affective reactions (facial expressions) is a poor indicator of the impact of affective reactions on ad attitude and postexposure brand attitude. The results indicate that verbal measures are better indicators of the influence of affective reactions. Furthermore, the contribution of verbal affective responses to ad attitude and postexposure brand attitude is greater for unfamiliar brands than familiar ones (Derbaix, 1995).

Research Questions

This study explores the effects of media literacy training on children's attitudes toward specified products within the framework of the Elaboration Likelihood Model (ELM) of persuasion (Petty & Cacioppo, 1986a; Petty & Cacioppo, 1986b) in order to understand better the effectiveness of media literacy training on children's attitudes toward persuasive messages. The catalyst of this empirical investigation is the question:

"What are the effects of media literacy training on children's attitudes toward persuasive messages?" While this question serves as a focus for the study, the following research questions guide this empirical investigation.

1) Does media literacy training increase the likelihood of persuasion via the central route?
2) What role does media literacy training play in influencing children's attitude toward a product of high personal relevance?

The Hypotheses

The proposed hypotheses are based on the research questions above and the relevant literature. The first two hypotheses deal with the ELM as a whole. They suggest that media literacy training plays a moderating role in the persuasion process. The hypotheses are grounded in previous research by Petty and his colleagues.

> In general, we suspect that any variable that increases the likelihood that people will be motivated and able to engage in the difficult task of evaluating the message arguments increases the likelihood of the central route to persuasion. On the other hand, any variable that reduces a person's motivation and/or ability to think about the message content would make the peripheral route more likely. (Petty et al., 1981a, p. 854)

To test the effectiveness of media literacy training to increase the likelihood of children following the central route to persuasion for an advertised product the following hypotheses are advanced.

H1: Media literacy training will increase the likelihood of children following the central route to persuasion for an advertised product.

H2: No media literacy training will increase the likelihood of children following the peripheral route to persuasion for an advertised product.

Four additional hypotheses are advanced to test the effectiveness of media literacy training on changing children's attitude toward a particular advertised product that is of great personal relevance.

H3: Media literacy training, as compared to no training, will yield greater positive changes in children's attitude toward an advertised product when many strong arguments are used.

H4: Media literacy training, as compared to no training, will yield greater positive changes in children's attitude toward an advertised product when few strong arguments are used.

H5: Media literacy training, as compared to no training, will yield greater negative changes in children's attitude toward an advertised product when many weak arguments are used.

H6: Media literacy training, as compared to no training, will yield greater negative changes in children's attitude toward an advertised product when few weak arguments are used.

CHAPTER 3
METHODS

An Overview

A 2 (argument quality) x 2 (number of arguments) x 2 (media literacy training) posttest-only between-subjects experimental design with random assignment was used to test the moderating role of media literacy training on children's attitude toward an advertised product within the framework of the ELM. The central focus of the experiment was to assess if media literacy training influences the process by which children's attitudes toward products are changed.

As discussed in Chapter 1, few studies have tested the effectiveness of media literacy training empirically; although several researchers have suggested media literacy training will improve students' evaluation of media messages (Considine, 1990; Duncan, 1989; Kahn & Master, 1992; Melamed, 1989; Wulfemeyer et al., 1990). Recent research by Austin and Johnson (1997a, 1997b) empirically tested the immediate and delayed effectiveness of general and specific media literacy training on children's decision-making processes about alcohol. Austin and Johnson used a Solomon 4-group experimental design in both studies to test their hypotheses. Results indicated that children's understanding of persuasive content is a key variable in the decision-making process. In their studies, media literacy training was identified as an effective means of improving children's understanding of persuasive media content.

Subjects

Subjects were recruited for the experiment from fourth and fifth grade classes at Statham Elementary School in Statham, Georgia. Parental consent forms (see Appendix A for the informed consent form) were sent home with every child in the fourth and fifth grades. As an incentive, all students who returned their consent form were eligible for a gift certificate drawing. A drawing for each grade awarded local mall gift certificates of $25, $15, and $10. Additionally, the class in each grade that returned the most parental consent forms was awarded an ice cream party. Furthermore, a substantial monetary donation for instructional materials was made to the school principal and distributed evenly among the fourth and fifth grade teachers.

The total number of subjects that participated in the experiment was 148. Fourth grade subjects were tested on December 1, 1999 and fifth grade subjects on December 2, 1999.

Procedure

The same procedure was followed on both days of testing. Students numbered off by twos in their homeroom class. All "ones" remained in their homerooms and viewed a videotaped broadcast of "Bill Nye the Science Guy" and discussed the content of the program on caves (see Appendix B for the control group discussion guide). All "twos" gathered in a separate room and were taught a media literacy training lesson (see Appendix C for the lesson script) by the experimenter. After the discussion and lesson were completed, students were randomly assigned to one of four groups. Each student was handed an index card with a number that had been generated from a random numbers table. Each card also had a teacher's name. Students were instructed to go to the

appropriate teacher's classroom[5]. Students viewed one of four versions of a Pringles Potato Chips commercial (discussed below) twice in their respective classroom. Afterwards, students filled out a colored, 12-page questionnaire[6] (see Appendix D for the questionnaire) that was read out loud by the teacher. At the top of each page subjects were given brief instructions on how to complete the items on the page. At the bottom of each page, subjects were instructed to turn to the next page when they were told to do so. The first page, which included basic demographic questions, instructed students that they would be asked questions about the commercial they just saw. They were instructed to respond as best that they could. The second page asked students to list their thoughts about the commercial and then go back and rate those thoughts as positive or negative. The third page asked students to list the arguments they recalled in the commercial. The fourth and fifth pages included measures of attitude toward the product and attitude toward the ad, respectively. Pages six and seven included items that measured subjects' attitude toward television advertising in general. Items on pages eight and nine served as manipulation checks for the media literacy training lesson while pages 10 and 11 asked questions about peripheral cues contained in the commercial. The final page served as a measure of the overall persuasiveness of the commercial. The last question on page 12, which asked if subjects had seen the "Bill Nye the Science Guy" video, served to double-

[5] There were only two rooms available for use when the fifth grade students were tested. Therefore, each student was sent to one of two rooms. Once in the room, approximately half of the students were sent outside while one version of the Pringles Potato Chips commercial aired. The students in the classroom were then instructed to go outside while the other students returned to view another version of the Pringles commercial. All students reconvened in the appropriate classroom to fill-out the questionnaire. Colored questionnaires were used to ensure that the version of the commercial corresponded with the teacher's name and number on students' index cards.

[6] Colored questionnaires corresponded with level of argument quality and number of arguments in each commercial as well as whether subjects were in the control or experimental group.

check that subjects were filling out the appropriate questionnaire. After all items were completed, subjects placed the index card they had received inside their questionnaire and the teacher collected them. Students were debriefed and thanked for their participation in the study.

Product of Interest

A pretest was conducted to identify the product of interest to be used in the experiment (see Appendix E for the product of interest pretest). A product that generated moderate attitudes but was high in personal relevance was desired[7]. Eighteen subjects aged 8-12 years old were administered a 23-page questionnaire that asked them to rate 21 consumer products. The first and second pages, respectively, asked for demographic information and provided examples of how to complete the form. The same 12 items were asked about all 21 products. The first six items represented an attitude toward the product scale developed by Stayman and Batra (1991)[8]. The scale was highly reliable, with a Cronbach's alpha of .98. The final six items represented the General Scale to Measure Involvement (GSMI), which was developed by Traylor and Joseph(1984)[9]. The GSMI was highly reliable as well (α = .88). Subject responses were analyzed and potato chips were identified as a product that elicited moderate attitudes but high involvement. Therefore, a potato chips commercial was sought.

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[7] The ELM purports that subjects who have the motivation and ability to scrutinize a message will be more likely to follow the central route to persuasion. Therefore, a product of high personal relevance ensures subjects are motivated to process a message about the product. It is predicted that media literacy training will produce the ability necessary to follow the central route. Subjects must have moderate attitudes so that their attitudes can change either positively or negatively. Initial strong positive or strong negative attitudes will produce an unwanted ceiling effect.

[8] Stayman and Batra (1991) reported a Cronbach's alpha of .96.

[9] Traylor and Joseph (1984) reported a Cronbach's alpha of .92.

The Commercial

Several commercials were reviewed and a nationally broadcast Pringles Potato Chips commercial with a music bed and without voice-over[10] was identified for use in the experiment. The commercial shows young children[11] (approximately 8-12 years old) in several scenarios enjoying Pringles Potato Chips. The theme of the commercial is "Once you pop, the fun don't stop." The music bed plays throughout the 30-second commercial with the lyrics "I want Pringles" repeating.

To test the proposed hypotheses, four different voice-overs (see below) were written and added to the Pringles commercial. The four versions represented various levels of argument quality and number of arguments consistent with previous research by Petty and Cacioppo (1986).

The original copy of the commercial was taped off-air on high quality videotape. The experimenter recorded the voice-overs in a sound studio at the University of Florida and edited them on professional editing equipment[12]. Copies shown to subjects were of high audiovisual quality.

Design

The hypotheses suggested the need for eight experimental groups. Subjects either received media literacy training or watched the control video about caves. Subjects in both the control and experimental groups viewed one of the four versions of the Pringles Potato Chips commercial. The four versions of the commercial were 1) strong argument

[10] A voice-over free commercial was necessary to effectively manipulate argument quality and number of arguments.

[11] There were approximately 16 males and 14 females depicted in the commercial. The racially diverse characters (African American, Asian, and Caucasian) were seen in various costumes including a caveman, pirate, deserted islander, and astronaut.

quality x high number of arguments; 2) strong argument quality x low number of arguments; 3) weak argument quality x high number of arguments; and 4) weak argument quality x low number of arguments. Therefore, the study used a 2 (strong vs. weak argument quality) x 2 (high vs. low number of arguments) x 2 (control vs. experimental group) between-subjects factorial design (see Figure 3.1).

		No media literacy training	Media literacy training
Few arguments	Weak		
	Strong		
Many arguments	Weak		
	Strong		

Figure 3.1. Graphic representation of 2 X 2 X 2 factorial experimental design.

To ensure that the experimental manipulations were responsible for differences among groups, the groups had to be equivalent prior to the experiment. Random assignment to one of the four groups was employed to be able to infer treatment-caused changes in this study. According to Campbell and Stanley (1963), randomization is vital to equate control and experimental groups or several treatment groups. Randomization can rule out dangerous threats to internal validity, including testing, instrumentation, regression, and the interaction of selection and maturation. Furthermore, it creates conditions appropriate for analysis in the most common statistical models. However, Cook and Campbell (1979) warn that randomization does not cure all threats to validity.

[12] The experimenter has appeared in and voiced-over several television commercials and teaches courses in television production.

Despite acknowledged limitations, random assignment to groups was considered the best available method to test the hypotheses in this study. Therefore, as noted above, subjects randomly numbered off by twos for inclusion in either the control or experimental groups. From these groups, subjects were assigned to the four groups representing the levels of argument quality and number of arguments using a random numbers table.

Operational Definitions of Key Variables

Based on the literature review, the moderating role of media literacy training on the persuasive impact of advertisements was tested utilizing the following variables. The independent, manipulated variables were *argument quality*, *number of arguments*, and *media literacy training*. The dependent variables were *active cognitive processing* as measured by favorable and unfavorable thoughts, *attitude toward the product, attitude toward the advertisement, attitude toward television advertising in general*, and *attention to peripheral cues* (see Table 3.1).

Table 3.1. Independent and dependent variables within the study.

Independent Variables	Dependent Variables
1) Argument quality 2) Number of arguments 3) Media literacy training	1) Active cognitive processing a) Favorable thoughts b) Unfavorable thoughts 2) Attitude toward product 3) Attitude toward advertisement 4) Attitude toward TV advertising 5) Attention to peripheral cues

Independent Variables

To test whether subjects are following the central or peripheral route to persuasion, argument quality and number of arguments within a selected commercial advertisement were manipulated. A discussion of how the arguments were manipulated follows.

Argument Quality

Manipulation of argument quality. *Argument quality* was operationalized as either a strong argument or a weak argument. Petty and Cacioppo (1981a, 1986b) explain that when individuals rate the quality of the same argument there will always be some differences. However, the key to testing hypotheses within the framework of the ELM is to develop arguments that the majority of a particular population considers strong or weak. Following the steps suggested by Petty and Cacioppo (1981a, 1986b), this study generated "strong" and "weak" arguments for use in the Pringles Potato Chips commercial.

Pilot-testing arguments. Based on previous research by Petty and Cacioppo (1986b), the researcher generated a series of 26 arguments that were perceived to be either strong or weak statements about Pringles Potato Chips. A group of subjects similar to those who would be used in the actual experiment were asked to rate the arguments in a pilot test. Subjects were asked to rate the persuasiveness of each statement by responding to a four-item semantic differential scale (see Appendix F for the pilot-test questionnaire). Semantic differentials are common measures of peoples' attitudes (Osgood, 1965). To measure the quality of arguments, subjects were asked to rate each

statement (on a seven-point scale[13]) on four dimensions[14]: Don't want it/Want it; Doesn't make sense/Makes sense; Not believable/Believable; Weak/Strong.[15]

Twenty-nine subjects participated in the argument quality-rating test. Subjects ranged in age from 10-11 years old, 48 percent were male and 52 percent were female. The mean score was calculated by averaging responses on the four dimensions used to rate each argument. The median score was 4.75 with means ranging from 1 to 7. The lowest eight means were identified as weak arguments while the highest eight means were selected as strong arguments. To assess whether the strongest and weakest arguments were significantly different from one another, a multiple analysis of variance (MANOVA) was conducted. Results indicated a significant difference among means ($F(7, 161) = 5.86$, $p < .000$). Pairwise comparisons identified the weak argument seven ($M = 4.35$) as significantly different from strong argument seven ($M = 3.80$), but in the opposite direction. Weak argument eight ($M = 5.13$) and strong argument eight ($M = 5.14$) were not significantly different. Therefore, only six weak and six strong arguments were used to develop voice-over copy for the Pringles Potato Chips commercial.

Persuasiveness of commercial. For the sake of general curiosity and potential comparison, the persuasiveness of each commercial version was assessed using the same

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[13] Subjects were instructed that numbers 1 and 7, each closet to one of the words in the adjective pair, represented a very strong feeling on the negative (bad) side and positive (good) side, respectively. Numbers 2 and 6 indicated strong feelings on the negative and positive side, respectively. Numbers 3 and 5 indicated fairly weak feelings on the negative and positive side, respectively, and number 4 represented an undecided view of the dimension.

[14] The wording of two of the dimensions was changed in order to make the language more age-appropriate. Instead of Unconvincing/Convincing the terms Don't want it/Want it were used, and the terms Doesn't make sense/Makes sense replaced Irrational/Rational.

[15] After testing for persuasiveness, Petty and Cacioppo (1986b) suggest testing for believability with another panel of subjects in order to develop strong and weak arguments "that do not strain credulity" (p. 134). However, due to a limited number of subjects, the believability and persuasiveness dimensions were tested at the same time.

four-item semantic differential scale used in the pilot-test for argument quality (see page 12 of the questionnaire in Appendix D). This measure focused on the overall perceived persuasiveness of the commercial rather than the level of quality of each individual argument.

Number of Arguments

Using the theme of the Pringles Potato Chips commercial ("Once you pop, the fun don't stop") and the pilot-test of argument quality, four voice-overs were written. Petty and Cacioppo (1986b) suggest that number of arguments can be used as a peripheral cue to persuasion. They distinguish between a high number of arguments (6-8) and a low number of arguments (1-3) (Petty & Cacioppo, 1984). Therefore, six arguments were used to represent a high number and two arguments represented a low number.

Manipulation check for number of arguments. Two items served as a manipulation check for the number of arguments in each version of the Pringles commercial. The first item asked if the commercial presented many arguments and the second item asked if the commercial presented few arguments for eating Pringles Potato Chips.

Commercial voice-over copy. The four voice-overs are as follows:

Strong argument quality x high number of arguments: Once you pop, you can't stop! That's because Pringles Potato Chips taste great. They're so delicious, and they crunch when you munch. Pringles are less greasy than other chips, and they're packed in airtight cans for freshness. With a unique shape and great taste, you and your friends will love Pringles. Pop open a can of Pringles today. Once you pop, the fun don't stop!

Strong argument quality x low number of arguments: Once you pop, the fun won't stop! That's what happens when you pop open a can of Pringles Potato Chips. Pringles are really great snacks. They're less greasy than other chips, and they're packed in airtight cans for freshness. Pop open a can of Pringles today. Once you pop, the fun don't stop!

Weak argument quality x high number of arguments: Once you pop you can't stop! That's because Pringles Potato Chips are good for you. They're really healthy snacks. Pringles have less fat and more vitamins and minerals than other snacks. Pringles are fun to eat because they stay in one piece. They don't break like bags of chips. Pop open a can of Pringles today. Once you pop, the fun don't stop!

Weak argument quality x low number of arguments: Once you pop, the fun won't stop! That's what happens when you pop open a can of Pringles Potato Chips. Pringles are really great snacks. And, they're even good for you. Plus, Pringles are fun to eat because they stay in one piece. Pop open a can of Pringles today. Once you pop, the fun don't stop!

Message recall. As a manipulation check on message recall, subjects were asked to write down as many arguments or claims that they could remember from the Pringles Potato Chips commercial they saw. Subjects were given three minutes to complete the task. Twelve six-inch by one-half inch boxes were provided for their responses. Three independent coders coded responses for accuracy. Inter-coder reliability was high (α = .94). Recall items were coded as correct (1) if they appeared in the appropriate

corresponding voice-over copy. All other items were coded as incorrect (0). Summing the number of correct responses produced an overall argument recall score.

As a manipulation check, two items asked about the number of arguments in the Pringles commercial. One item asked if the commercial presented a lot of reasons for eating Pringles, while the other asked if the commercial presented few reasons for eating Pringles. Responses were on a seven-point Likert-type scale (disagree/agree).

Media Literacy Training Lesson

For the purposes of this study, media literacy training was operationalized (see Appendix C) as a 50-60 minute lecture and discussion about the persuasive techniques used by advertisers to sell products and how to detect strong and weak arguments in commercials. The learning objectives of the lesson were designed so that 1) students will be able to identify persuasive techniques used by advertisers and 2) students will be able to distinguish between strong and weak arguments in commercials. The experimenter introduced various media literacy principles by showing video clips from Consumer Reports' *Buy Me That!* series and selected broadcast commercials. The three half-hour *Buy Me That!* programs, which were produced for children (ages 4 to 12, specifically) and their families, focus on the sophisticated and sometimes deceptive techniques used by television advertisers to persuade children to buy or ask for certain brands of products. These programs provide parents and children with helpful hints for managing the sales pitch (Consumers Union of United States, 1989). Austin and Johnson (1997a; 1997b) used the first of these videos in their experiments to assess the effectiveness of media literacy training on children's decision-making about alcohol. The selected broadcast commercials were used to reinforce and help the subjects apply the principles introduced

in the *Buy Me That!* videos. Seventy-three of the subjects were exposed to the 50-60 minute media literacy training session while the other 75 subjects watched an episode of "Bill Nye the Science Guy" on caves and engaged in a discussion about the program content.

Subject Variables

According to the ELM, in order for an individual to follow the central route to persuasion, the person must be motivated to process a message and have the ability to do so (Petty & Priester, 1994). By design, all subjects were to have a high level of motivation. Subjects' ability to process the message depended upon their level of exposure to media literacy training.

Motivation to process a message was operationalized as high involvement with Pringles Potato Chips. Subjects had a high level of motivation to process a message because of the personal relevance of Pringles Potato Chips, which were used in the experiment. As noted above, personal relevance was measured using an adaptation of the General Scale to Measure Involvement with Products (GSMI) developed by Traylor and Joseph (1984). "The GSMI is a six-item scale composed of Likert statements scored on a seven-point basis (disagree-agree)" (Bearden, Netemeyer, & Mobley, 1993, p. 141). The scale is applicable to a varying range of products and is unidimensional. Summing the scores of each item produces an overall GSMI score (Bearden et al., 1993). The six items, with a slight modification to item one[16], are as follows: 1) When other people see me using this product, they think of me in a certain way; 2) You can tell a lot about a person by seeing what brand of this product he uses; 3) This product helps me express

[16] The original item was "When other people see me using this product, they form an opinion of me."

who I am; 4) This product is "me"; 5) Seeing somebody else use this product tells me a lot about that person; and 6) When I use this product, others see me the way I want them to see me.

Ability to process a message was operationalized as media literacy training or lack thereof. Level of subject ability was established by whether or not they received training. Subjects were asked questions on the posttest about their media literacy training as a manipulation check. The manipulation check included a series of seven-point (disagree/agree) Likert-scale statements that assessed subjects' recall of the material presented during the media literacy lesson. The first eight items dealt with topics like persuasive tactics, editing, camera angles, humor, color, strength of claims, attractiveness of actors/performers, and identification with actors/performers. The latter eight items were techniques[17] potentially used by advertisers to convince consumers to buy products. Subjects were asked to indicate which methods they believed were used by advertisers. Three bogus items were included to clearly distinguish lesson content from irrelevant information.[18] The scale was not previously tested.

Dependent Variables

Active cognitive processing was operationalized as favorable and unfavorable thoughts elicited through the thought-listing technique (Cacioppo & Petty, 1981). Twelve six-inch by one-half inch boxes were provided for subjects to write down all of their thoughts during the commercial. They were given three minutes to complete the task. Afterward, subjects were asked to rate their thoughts as good, bad, or not sure by

[17] The eight items included quick cuts, bad language, catchy music, ugly people, humor, arguments, mad people, and famous people.

[18] The bogus items were bad language, ugly people, and mad people.

circling "G," "B," or "NS" in the boxes where they had written their thoughts. Research on attitude change suggests there are three dimensions that characterize the classification of responses (Cacioppo & Petty, 1981). The polarity dimension, which is comprised of favorable, unfavorable, or neutral/irrelevant thoughts, was used in this experiment. Three independent coders who were blind to the experimental conditions coded the thought-listings. Coders identified subjects' thoughts as favorable (1), unfavorable (-1), or neutral/irrelevant (0) based on the descriptions below. Coders had a high reliability (α = .94)[19]. Disagreements were resolved through discussion and majority vote. An overall attitude score was achieved by summing coded responses.

Favorable thoughts are statements that mention specific desirable attributes or positive associations, statements that support the validity or value of the stimulus (Pringles Potato Chips commercial), and statements of positive affect about the product and/or commercial. Example of favorable thoughts include, "I want some," "I am hungry," and " I was thinking how good Pringles are." Favorable thoughts could not be mere recall items. There should be evidence of a positive disposition toward Pringles Potato Chips and/or the commercial for Pringles (Cacioppo & Petty, 1981).

Unfavorable thoughts are statements that mention specific undesirable attributes or negative associations, challenges to the validity of the stimulus (Pringles Potato Chips commercial), and statements of negative affect about the product and/or commercial. Examples of unfavorable thoughts include, "It was weird," "They are not healthy," and "Pringles are not the best." Thoughts could not be mere recall items. There should be

[19] Interestingly, when student ratings of their thoughts were included in the reliability analysis Crobach's alpha remained high (α = .86).

evidence of a negative disposition toward Pringles Potato Chips and/or the commercial for Pringles (Cacioppo & Petty, 1981).

Neutral/Irrelevant thoughts are statements that express no affect with regards to the stimulus (Pringles Potato Chips commercial). Examples of neutral thoughts include "My cat," "My mom is getting married," "Dancing," and "Pirates." Neutral thoughts include recall items and items that show no evidence of a positive or negative disposition toward Pringles Potato Chips and/or the commercial for Pringles (Cacioppo & Petty, 1981).

Attitude toward the product was measured by a 10-item, seven-point semantic differential scale. The scale is a combination of hedonic and utilitarian items used by Stayman and Batra (1991) to produce an overall measure of brand attitude. Stayman and Batra (1991) reported Cronbach alphas of .90 and .94 for an eight-item and ten-item version of the scale, respectively. Sample items included bad/good, unfavorable/favorable, disagreeable/agreeable, unpleasant/pleasant, negative/positive, dislike/like, useless/useful, not beneficial/beneficial, low quality/high quality, and worthless/valuable.

Attitude toward the advertisement was measured by a 13-item, Likert-type scale. Several researchers have used varying versions of the scale to measure consumers' attitude toward an advertisement[20] (Burke & Edell, 1989; Edell & Burke, 1987; Wells, Leavitt, & McConville, 1971; Zinkhan, Locander, & Leigh, 1986). Previous administrations of the scale used 14 items[21] and asked subjects to indicate how well a list

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[20] Previous reliability analyses resulted in alphas of .89 and .95.

[21] Informal testing revealed subjects did not comprehend the term "valuable" well enough to include it in the scale. Therefore, the scale was reduced from 14 items to 13.

of words describes the advertisement they are exposed to by placing a number next to the word. For example, if a subject believes a word describes the ad extremely well, he/she places a "5" next to the word. If the word does not describe the ad at all well, the subject places a "1" next to the word. However, the format was changed to make it consistent with the other scales used to measure attitude toward advertising in general. The list of items included (1) Not believable/Believable; (2) Not for me/For me; (3) Not informative/Informative; (4) Not interesting/Interesting; (5) Irritating/Not irritating; (6) Not meaningful/Meaningful to me; (7) Phony/Not phony; (8) Ridiculous/Not ridiculous; (9) Terrible/Not terrible; (10) Not worth remembering/Worth remembering; (11) Did not like ad/Liked ad; (12) Did not enjoy ad/Enjoyed ad; and (13) Did not find ad to be good/Found ad to be good.

Attitude toward advertising in general was measured by a compilation of three scales developed by Alwitt and Prabhaker (1992) that have been used to measure beliefs and perceptions about television advertising. The language used in the items was adapted so that it was appropriate for the age of the subjects.

Perceptions of the personal and social benefits or costs of TV advertising[22] were measured by the first set of items.[23] The list included: (1) TV advertising is a good way to learn about what products and services are available; (2) TV advertising results in better products for you and your family[24]; (3) in general, TV advertising presents a true picture of the product advertised; (4) you can trust product brands advertised on TV more

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[22] Alwitt and Prabhaker (1992) reported a Cronbach's alpha of .86.

[23] The original scale included 10-items, but this item, "TV advertising helps raise our standard of living," was eliminated because it was determined subjects would not comprehend "standard of living."

[24] The original item was "TV advertising results in better products for the public."

than product brands not advertised on TV[25]; (5) TV advertisements help me find products that match my personality and interest; (6) TV advertising helps me know which product brands have the qualities or features I am looking for[26]; (7) TV advertising gives me a good idea about products by showing the kinds of people who use them; (8) TV advertising helps me buy the best product for the price[27]; and (9) I am willing to pay more for a product that is advertised on TV.

The second set of items measured perceptions that TV advertising does not offer information.[28] Alwitt and Prabhaker's (1992) scale included the following items: (1) most TV ads today are not about products themselves, but just make me feel a certain way (e.g., happy, excited, good)[29]; (2) today's TV ads don't give you as much information as they could[30]; and (3) today's TV ads tell you more about the people who use a product than about what the product does for you.[31]

The third and final set of items focused on perceptions that TV advertising is deceptive.[32] The four items included: (1) most TV ads try to work on (affect) people's emotions (feelings)[33]; (2) there is a critical need for more truth in today's TV advertising;

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[25] The original item was "You can trust brands advertised on TV more than brands not advertised on TV."

[26] The original item was "TV advertising helps me know which brands have the features I am looking for."

[27] The original item was "TV advertising helps me buy the best brand for the price."

[28] Alwitt and Prabhaker (1992) reported a Cronbach's alpha of .61.

[29] The original item was "Most TV ads today are not about products themselves, but just create a mood."

[30] The original item was "Today TV ads don't give you as much information as they used to."

[31] The original item was "Today's TV ads tell you more about the people who use a brand than about what the brand does for you."

[32] Alwitt and Prabhaker (1992) reported a Cronbach's alpha of .71.

[33] The original item was "Most TV ads try to work on people's emotions."

(3) TV commercials do not show life as it really is; and (4) TV advertising mostly tries to create small differences between products that are a lot alike.[34]

Attention to peripheral cues was operationalized through a series of questions posed to the subjects. Two questions, which dealt with the peripheral cue of interest (i.e., number of arguments), asked if the commercial presented many or few arguments for eating Pringles Potato Chips. As noted earlier, these two items also were used as a manipulation check for number of arguments. Four questions asked if subjects liked the kids in the commercial, if they wanted to be friends with the kids, if they had friends like the kids in the ad, and if the kids were attractive. Three other questions dealt with the credibility of the announcer. Items asked if subjects thought the announcer knew a lot about Pringles, if subjects believed what he said, and if he was telling the truth.

Path for Analysis

The next chapter includes an examination of descriptive statistics of the data followed by an analysis of the manipulation checks used in this experiment. The reliabilities of the scales will be discussed and the hypotheses will be tested using experimental Analysis of Variance (ANOVA).

[34] The original item was "TV advertising mostly tries to create imaginary differences between products that are very similar."

CHAPTER 4
RESULTS

Analysis of variance (ANOVA) was used to test effects of argument quality, number of arguments, and media literacy training on active cognitive processing, attitude toward the product, attitude toward the ad, attitude toward TV advertising in general, and attention to peripheral cues.

The presentation begins with descriptive demographic data on the participating subjects. Next, scale properties and reliabilities used as independent and dependent measures are examined. Finally, results of the manipulation checks and tests of the hypotheses are presented.

Descriptive Analysis

Demographic Data

One hundred forty-eight subjects participated in the study. Of those, 54 percent ($n = 80$) were male and 46 percent ($n = 68$) were female. Subjects ranged in age from 8 to 12 ($M = 10$, $SD = .79$). Ninety of the subjects were in the fourth grade and 58 were fifth graders. Seventy-nine percent of the subjects were white, 15 percent black, two percent Asian, and the remaining four-percent reported being Native American or Other.

The Scales

This study relied primarily on six measures for the initial tests of hypotheses. Four scales, attitude toward the product, attitude toward the ad, attention to peripheral

cues, and attitude toward advertising in general[35], measured the dependent variables. Two other scales were used as manipulation checks for the independent variables. Four of the scales had proven to be highly reliable in previous research. Scales for attention to peripheral cues and the media literacy training manipulation check were not previously tested.

A reliability analysis, in which Cronbach's alpha and average inter-item correlation coefficients were examined, was used to analyze the internal consistency of all scales. Scale properties for the media literacy manipulation check and attention to peripheral cues also were scrutinized via factor analysis. Factor analysis is a procedure used to assess construct validity (Huck & Cormier, 1996) and to determine if more basic, underlying variables represent clusters of inter-correlated items (Williams, 1986). Principal components factor analysis with varimax rotation was used to analyze the scales. Items were considered to load on a factor if factor scores were .40 or higher. Results for each scale are discussed below.

Attitude Toward the Product Scale

The attitude toward the product scale is a compilation of two separate scales that measure the pleasure-related and value-related aspects of a consumer's attitude toward a specific product. Reliability analysis of the ten-item scale produced a Cronbach's alpha of .90. Deletion of any of the items would have reduced the reliability of the scale. Therefore, a single-factor solution was suggested, and the 10-item scale was retained as a measure of attitude toward the product. The average inter-item correlation for the 10 items was .47.

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[35] Attitude toward advertising in general was measured by three separate scales: (1) perceptions of the personal and social benefits or costs of TV advertising; (2) perceptions that TV advertising does not offer

Attitude Toward the Ad Scale

Reliability analysis of the attitude toward the ad scale indicated a highly reliable scale (α = .92). Deleting any of the items would have decreased the reliability. The mean inter-item correlation was .47. The 13-item scale was retained as a single measure of attitude toward the ad.

Attitude Toward TV Advertising Scale

Three previously tested scales measured various dimensions of attitude toward TV advertising in general. A nine-item scale that measured perceptions of the personal and social benefits or costs of TV advertising was highly reliable with a Cronbach's alpha of .81. Deletion of any items would have reduced the reliability. Average inter-item correlation was .33.

A three-item scale that measured perceptions that TV advertising does not offer information had a relatively low reliability (α = .34). Deletion of one item would have slightly increased the reliability (α = .38). Mean inter-item correlation was .15. Given the low reliability and average inter-item correlation, this scale was discarded.

A four-item scale that produced a Cronbach's alpha of .59 measured perceptions that TV advertising is deceptive. Deletion of any item would have decreased the reliability. Average inter-item correlation equaled .27.

Media Literacy Training Manipulation Check Scale

A 13-item media literacy training manipulation check scale was used to measure the effectiveness of the media literacy lesson. Principal components factor analysis with varimax rotation resulted in two factors with Eigenvalues greater than 1.0. Seven of the

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information; and (3) perceptions that TV advertising is deceptive.

items loaded on the first factor, which explained 30.1 percent of the variance and had an Eigenvalue of 3.9. Six items loaded on the second factor, which explained 19.2 percent of the variance and had an Eigenvalue of 2.5. The seven items that loaded on the first factor had a reliability of .82 and an average inter-item correlation of .40. Although deletion of one of the items increased the reliability slightly ($\alpha = .83$), the entire seven-item scale was retained. The six items that loaded on the second factor had a reliability of .75 and a mean inter-item correlation of .34. Although deletion of one item would have increased the reliability slightly ($\alpha = .77$), the increase was not significant. The six-item scale was retained as a manipulation check.

Number of Arguments Manipulation Check and Attention to Peripheral Cue Scale

A two-item scale was used to assess the effectiveness of the manipulation of number of arguments in the four versions of the Pringles Potato Chips commercial and subjects' attention to the peripheral cue. Item two was reverse-coded because the initial correlation matrix indicated a negative correlation. A principal components factor analysis with varimax rotation produced one factor that explained 60.1 percent of the variance (Eigenvalue = 1.2). Reliability analysis produced a small Cronbach's alpha of .34, which is likely due to having only two items in the scale. The correlation of the two items was .20. Despite the low reliability, the two-item scale was retained as a single measure of the number of arguments manipulation check and as the attention to the peripheral cue of interest scale.

Attention to Additional Peripheral Cues Scale

Additional peripheral cue measures were included in the questionnaire for potential comparison. Principal components factor analysis with varimax rotation on the

additional seven-item peripheral cue scale produced two factors with Eigenvalues over 1.0. Four of the items loaded on the first factor and three loaded on the second factor. The first factor produced an Eigenvalue of 2.3 and explained 33.1 percent of the variance. The second factor produced an Eigenvalue of 1.7 and explained 24.1 percent of the variance. Reliability analysis of the four-item scale, which included items that addressed how well subjects liked the kids in the commercial, produced a Cronbach's alpha of .76. Average inter-item correlation was .44. Deletion of any item would have resulted in a lower alpha. Therefore, the four-item scale was retained as one additional measure of attention to peripheral cues. Reliability analysis of the three-item scale, which included items that assessed the credibility of the commercial announcer, revealed a Cronbach's alpha of .58 and a mean inter-item correlation of .33. High factor loadings suggested all three items represent the same dimension. The three-item scale was retained as a second additional measure of attention to peripheral cues.

Persuasiveness of the Commercial Scale

A previously tested four-item scale was used to assess persuasiveness of the commercial. This measure assessed the overall persuasiveness of the four commercial versions rather than the level of argument quality. Reliability analysis of the four-item scale produced a Cronbach's alpha of .76 and an average inter-item correlation of .45.

Manipulation Checks

Media Literacy Training

Media literacy training was manipulated by exposing the experimental group of subjects to a 50-60 minute media literacy lesson. Subjects in the control group were not

exposed to the lesson; they watched and discussed a television program about caves. It was suggested that subjects exposed to media literacy training would have greater ability to process the Pringles Potato Chips commercial. Increased ability would increase the likelihood of following the central route to persuasion as suggested by the ELM (Petty & Cacioppo, 1986b). In contrast, subjects not exposed to the media literacy lesson would have less ability to process the commercial message via the central route. Therefore, control group subjects would be more likely to follow the peripheral route to persuasion (Petty & Cacioppo, 1986b).

To test whether subjects attended to and remembered the media literacy lesson subjects were asked how much they agreed or disagreed with 13 statements[36] about information contained in the media literacy lesson. Subjects who were exposed to the media literacy lesson were expected to score higher on the measure than subjects not exposed.

As noted above, factor analysis and reliability analysis produced two separate media literacy manipulation check scales. An independent-samples t-test found no significant difference between the control group and experimental group on the seven-item scale (t (142) = -.80, $p < .43$) or the six-item scale (t (139) = -1.64, $p = .10$). Therefore, the media literacy training manipulation check was unsuccessful.

Argument Quality

Argument quality was manipulated by varying the level of argument quality (weak vs. strong) within the four versions of the Pringles Potato Chips commercial. Pilot test data provided statistical evidence (F (7, 161) = 5.86, $p < .000$) that the arguments

[36] Although sixteen items were presented to subjects, only 13 were used to assess the effectiveness of the media literacy lesson because three items were bogus.

used in the commercial versions were considered strong or weak by subjects similar to those who participated in the experiment (see Chapter 3 for a complete description of pilot test results).

Number of Arguments

Subjects in the different treatment groups were exposed to varying numbers of arguments within the versions of the Pringles Potato Chips commercials. Therefore, number of arguments was manipulated by including a high number (six) or a low number (2) of arguments in the various commercial versions. It was expected that subjects in the control group would pay more attention to the number of arguments contained in the commercial than the quality of the arguments. In contrast, subjects in the experimental group would not pay as much attention to the number of arguments; rather, they would scrutinize the quality of the arguments.

To test whether subjects attended to and remembered the number of arguments, they were asked to disagree or agree with two statements. The statements were: "The commercial presented many (a lot of) reasons (arguments/claims) for eating Pringles Potato Chips" and "The commercial presented few (not a lot of) reasons (arguments/claims) for eating Pringles Potato Chips." Subjects' responses to the second item were reversed coded. Subjects who were exposed to a high number of arguments were expected to score higher on the first statement and lower on the second. Subjects exposed to a low number of arguments were expected to score lower on the first statement and higher on the second.

Unexpectedly, the manipulation was not successful. An independent samples t-test compared means of subjects exposed to a high number of arguments and subjects

exposed to a low number of arguments. Mean scores were not significantly different among subjects exposed to a high number ($M = 4.55$) and subjects exposed to a low number ($M = 4.78$, t (144) = -.78, $p < .44$). The two-item scale produced a low Cronbach's alpha of .34. Therefore, this might be a reason the manipulation check was unsuccessful.

Further analysis compared the means of subjects on the single item, "There are many (a lot) of reasons (arguments/claims) for eating Pringles Potato Chips." Results of the independent samples t-test revealed no significant difference among subjects (M = 4.81, high number; $M = 5.40$, low number; t (145) = -1.57, $p = .117$). When means of subjects' responses were compared on the single item, "The commercial presented few (not a lot of) reasons (arguments/claims) for eating Pringles Potato Chips," no significant difference was found ($M = 4.30$, high number; $M = 4.23$, low number; t (145) = .17, $p <$ .87). These results confirm that the manipulation check for number of arguments was not successful.

Attention to Additional Peripheral Cues

As mentioned earlier, two different scales measured attention to additional peripheral cues. One-way ANOVA results for the first attention to peripheral cues scale, which assessed if subjects liked the kids in the commercial, indicated a significant difference among the experimental ($M = 3.11$) and control ($M = 3.80$) groups (F (1, 145) = 5.43, $p = .021$). A significant difference was also found between the experimental (M = 3.08) and control ($M = 3.82$) groups (F (1, 145) = 7.32, $p = .008$) for the second peripheral cues scale, which assessed the credibility of the announcer.

Persuasiveness of Commercial

As previously noted, the persuasiveness of the commercial was assessed for potential comparisons. A four-item scale, identical to the one used in the pilot test, was employed. However, subjects were not asked what they thought about each individual argument; rather, they were asked how persuasive they thought their version of the Pringles Potato Chips commercial was. Subjects rated the overall commercial on the following semantic differentials: Doesn't make me want Pringles/Makes me want Pringles; Doesn't makes sense/Makes sense; Not believable/Believable; Weak/Strong. Attitudes were gauged on a seven-point scale, with 1 and 7 representing the extremes. A three-way ANOVA (2 x 2 x 2) testing the persuasiveness of the commercial revealed a significant main effect for control ($M = 4.74$) versus experimental ($M = 3.79$) groups ($F(1, 123) = 9.74$, $p = .002$). No interactions or additional main effects were found.

Tests of Hypotheses

To test the general research question "Does media literacy training increase the likelihood of persuasion via the central route?" two hypotheses were proposed. The two hypotheses are as follows:

H1: Media literacy training will increase the likelihood of children following the central route to persuasion for an advertised product.

H2: No media literacy training will increase the likelihood of children following the peripheral route to persuasion for an advertised product.

Stated concisely, it was expected that subjects in the experimental condition would follow the central route to persuasion while subjects in the control condition would follow the peripheral route.

To test these two hypotheses, subjects exposed to media literacy training (n = 73) were compared to subjects in the control group (n = 75) on each dependent measure. A one-way ANOVA for the first dependent variable, active cognitive processing, revealed no significant difference between the experimental ($\underline{M}$ = .69) and control ($\underline{M}$ = 1.03) groups ($\underline{F}$ (1, 145) = .73, $\underline{p}$ > .39). Therefore, Hypothesis 1 was not supported.

The same scale used for the manipulation check for number of arguments was used as the attention to the peripheral cue of interest scale. One-way ANOVA results indicated no significant difference among the experimental ($\underline{M}$ = 4.50) and control ($\underline{M}$ = 4.83) groups ($\underline{F}$ (1, 144) = 1.22, $\underline{p}$ = .271). Thus, Hypothesis 2 was not supported either.

Four hypotheses were proposed to test the effectiveness of media literacy training on changing children's attitude toward a particular advertised product that was of great personal relevance. The hypotheses are as follows:

H3: Media literacy training, as compared to no training, will yield greater positive changes in children's attitude toward an advertised product when many strong arguments are used.

H4: Media literacy training, as compared to no training, will yield greater positive changes in children's attitude toward an advertised product when few strong arguments are used.

H5: Media literacy training, as compared to no training, will yield greater negative changes in children's attitude toward an advertised product when many weak arguments are used.

H6: Media literacy training, as compared to no training, will yield greater negative changes in children's attitude toward an advertised product when few weak arguments are used.

Stated simply, it was expected that a three-way interaction between treatment (media literacy training or lack thereof), argument quality, and argument number would produce significant differences among subjects. It was thought that subjects exposed to media literacy training would have higher scores on attitude measures when strong arguments were used despite the number of arguments. Moreover, it was believed that subjects exposed to media literacy training would produce lower scores on attitude measures when weak arguments were used despite the number of arguments.

To test the four hypotheses a three-way (treatment x argument quality x number of arguments) ANOVA was run for each dependent variable. Results indicated no three-way interactions. Therefore, hypotheses 3-6 were not supported and must be rejected.

Further examination of the three-way ANOVA results revealed interesting findings. A two-way interaction (see Figure 4.1) was found for treatment group by number of arguments ($\underline{M}$ = .17, control x high number, $\underline{M}$ = 1.89; control x low number; $\underline{M}$ = .92, experimental x high number; $\underline{M}$ = .39, experimental x low number) on active cognitive processing ($\underline{F}$ (1, 139) = 8.71, $\underline{p}$ = .004). Main effects were found for treatment group ($\underline{M}$ = 5.21, control; $\underline{M}$ = 4.17, experimental) on attitude toward the product ($\underline{F}$ (1, 121) = 18.29, $\underline{p} < .000$) and attitude toward the ad ($\underline{M}$ = 4.73, control; $\underline{M}$ = 3.59,

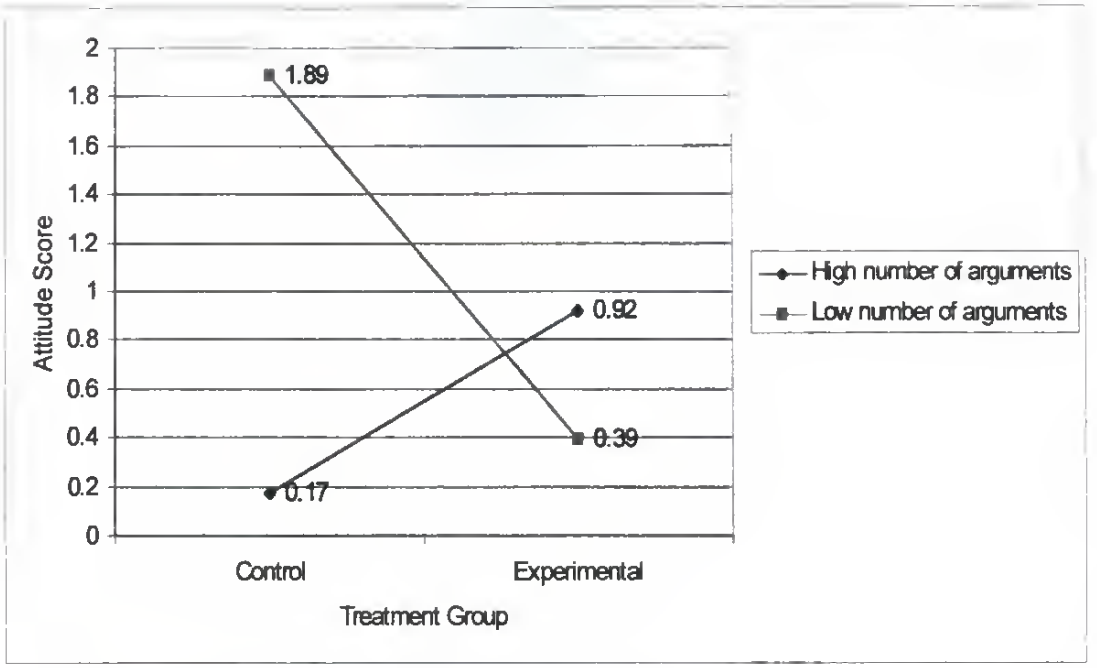

Figure 4.1. Two-way interaction of treatment group and number of arguments on active cognitive processing.

experimental; $F = (1, 111) = 16.82$, $p < .000$). A main effect was found for treatment group on the perceptions of the personal and social benefits or costs of TV advertising scale ($M = 4.07$, control; $M = 3.04$, experimental; F (1, 133) = 16.56, $p < .000$), which was one of the scales that measured attitude toward TV advertising in general. However, the perceptions that TV advertising is deceptive scale, which was the other measure of attitude toward TV advertising in general, did not produce a main effect for treatment group ($M = 4.89$, control; $M = 5.06$, experimental; F (1, 136) = .47, $p < .50$). Both scales that measured additional peripheral cues produced a main effect for treatment group (M = 3.77, control; $M = 3.13$, experimental; F (1, 139) = 4.69, $p = .032$; $M = 3.80$, control; M = 3.07, experimental; F (1, 139) = 7.21, $p = .008$).

A main effect was found for argument quality on attitude toward the product (M = 4.95, strong quality; $M = 4.42$, weak quality; F (1, 121) = 4.76, $p = .03$), attitude toward advertising in general (perceptions that TV advertising is deceptive) ($M = 5.30$, strong quality; $M = 4.65$, weak quality; F (1, 136) = 7.44, $p = .007$), and attention to an additional peripheral cue (liking kids in the commercial) ($M = 3.85$, strong quality; M = 3.05, weak quality; F (1, 139) = 7.51, $p = .007$).

A summation of the findings for the hypotheses reported above is presented in the next chapter, along with a discussion of the results and limitations of the study. The chapter will conclude with practical implications and suggestions for future research.

CHAPTER 5
DISCUSSION

This dissertation investigated the effectiveness of media literacy training on children's responses to persuasive messages within the framework of the Elaboration Likelihood Model of persuasion. More specifically, an experiment was conducted to determine if media literacy training increased the likelihood of children following the central route to persuasion rather than the peripheral route.

Two groups of hypotheses, six in all, were presented in detail in Chapter 2 to predict the effects of three independent variables on five dependent variables. The independent variables under investigation were argument quality, number of arguments, and media literacy training. The dependent measures tested were active cognitive processing, attitude toward the product, attitude toward the advertisement, attitude toward TV advertising in general, and attention to peripheral cues.

The key findings discovered from tests of these hypotheses are summarized below. Post-hoc analyses designed to provide insight into the findings follows the summary. Study limitations are presented along with implications of the research. Suggestions for future research conclude the dissertation.

Summary of Results

Tests of Hypotheses

The first group of the hypotheses suggested that exposure to media literacy training would increase the likelihood that subjects will follow the central route to persuasion and no exposure to media literacy training would increase the likelihood that subjects will follow the peripheral route to persuasion. It was predicted that media literacy training would provide the ability necessary to scrutinize arguments more critically, thus using central processing. However, no differences were found for the first two hypotheses.

The second group of hypotheses, which numbered four, investigated the effectiveness of media literacy training on changing children's attitudes toward a particular advertised product that was of great personal relevance. It was predicted that a three-way interaction between treatment (media literacy training or lack thereof), argument quality, and number of arguments would produce significant differences among subjects. As with the first set of hypotheses, no significant differences in attitude were found for subjects based on level of treatment, argument quality, or number of arguments.

In sum, the relationships predicted about the effectiveness of media literacy training on children's responses to persuasive messages within the framework of the Elaboration Likelihood Model of persuasion were not supported. Data analysis showed that there were no differences among groups of subjects when level of treatment, argument quality, and number of arguments were considered. However, some interesting findings were revealed during a post hoc analysis of the data. A summary of the findings is presented in the next section.

Post-Hoc Analysis

Although no three-way interaction was found between the independent variables, other unexpected findings emerged when ANOVA results were examined more closely. A two-way interaction was found for treatment group by number of arguments on active cognitive processing (F (1, 139) = 8.71, p = .004). Simple effects tests showed that subjects in the control group exposed to a low number of arguments (M = 1.89) had more favorable thoughts while watching the Pringles Potato Chips commercial than other control group and experimental group subjects. Experimental subjects exposed to a high number of arguments (M = .86) had more favorable thoughts than experimental subjects exposed to a low number of arguments (M = .51) and control subjects exposed to a high number of arguments (M = .14). If experimental group subjects learned to scrutinize commercial messages more closely as a result of media literacy training, then one might expect the number of favorable thoughts to be less than control group subjects. However, the findings reveal that control group subjects exposed to a high number of arguments had less favorable thoughts than any other subjects did. Furthermore, a high number of arguments produced more favorable thoughts for experimental subjects, while a low number of arguments produced more favorable thoughts for control subjects. Therefore, a logical explanation for these curious findings is difficult to suggest. Both manipulation checks for these findings were unsuccessful; therefore, no definitive conclusions can be drawn.

Main effects for treatment group were found for attitude toward the product, attitude toward the ad, and perceptions of the personal and social benefits or costs of TV advertising. These results suggest that media literacy training had some influence on

children's attitudes. The findings indicate that subjects in the control group had a more positive attitude toward Pringles Potato Chips after watching the commercial than subjects in the experimental group. Similar results for attitude toward the ad were found as well. One explanation for these findings is that media literacy training made subjects skeptical of the message and the commercial because they were more aware of the techniques used by advertisers to try and persuade viewers. The attitude toward the ad measure was included to ensure that the attitude toward the product was the only dimension being measured because commercial viewers might like a commercial, but not like a product and vice versa. These two measures suggest that experimental subjects had a negative attitude toward the product and the commercial.

Two measures of attitude toward advertising in general (perceptions of the personal and social benefits or costs of TV advertising and perceptions that TV advertising is deceptive) were used in this study. It was expected that there would not be any differences between groups on the dependent variable, attitude toward advertising in general, because the two groups were considered equivalent. Results indicated that both groups thought TV advertising was deceptive ($\underline{M}$ = 4.89, control; $\underline{M}$ = 5.06, experimental), but the experimental group ($\underline{M}$ = 3.04) had more negative perceptions of the personal and social benefits or costs of TV advertising than the control group ($\underline{M}$ = 4.07). One could argue that the two groups were equivalent in terms of their perception of TV advertising as being deceptive because of personal experience with products. For example, subjects may have seen a toy commercial, accepted the claims about the toy's performance, but found out after purchasing the toy that it did not perform as the commercial suggested.

Subjects diverged on their perceptions of the personal and social benefits or costs of TV advertising. One explanation for this disparity is that treatment effects may have occurred. Responses from subjects exposed to media literacy training might have been influenced by their newfound knowledge about the persuasive techniques used by advertisers.

Given the results, it is difficult to draw definitive conclusions about the measures for attitude toward advertising in general. Further testing must be done to determine the best possible scale for measuring attitude toward advertising in general.

Interestingly, measures for attention to additional peripheral cues also produced main effects for treatment groups (control vs. experimental). Although the peripheral cue of interest was number of arguments, other items were included that measured how much subjects liked the kids in the Pringles commercial and the credibility of the announcer. Subjects in the experimental group ($\underline{M}$ = 3.13) liked the kids in the commercial less than subjects in the control group ($\underline{M}$ = 3.77). Experimental subjects also found the announcer to be less credible ($\underline{M}$ = 3.07) than the control subjects ($\underline{M}$ = 3.80). These results cannot be used to offer support for the hypotheses that suggested that media literacy training would increase the likelihood of subjects scrutinizing message arguments and that a lack of training would tend to increase the likelihood that subjects would pay more attention to the peripheral cue of interest. However, the findings do provide potential areas of future study. If future studies establish that media literacy training is a moderating variable in the persuasion process, then the peripheral cue of interest could be changed to liking the kids in the commercial and announcer credibility to determine if certain cues receive more attention than others during the persuasion process.

Main effects were found for argument quality on attitude toward the product and attitude toward advertising in general (perceptions that TV advertising is deceptive). Subjects exposed to strong quality arguments (M = 4.95) had more favorable attitudes toward Pringles Potato Chips than subjects exposed to weak quality arguments (M = 4.42). This finding suggests that the strong arguments contained in the commercial message were compelling enough to produce favorable attitudes among subjects exposed to arguments of a strong quality. This would be expected since the pilot test for argument quality produced very distinct strong arguments and weak arguments. The differences found among the groups provide additional evidence that the quality of the arguments were distinctively strong and weak.

The difference among the groups for one of the attitude toward advertising in general measures (perceptions that TV advertising is deceptive) is intriguing. Strong quality argument subjects (M = 5.30) felt TV advertising was more deceptive than weak quality argument subjects did (M = 4.65). This finding is difficult to explain because one would expect that the strong arguments would be more compelling and produce more favorable attitudes. The findings indicated the opposite happened. Subjects exposed to weaker arguments felt that advertising was less deceptive than those exposed to strong arguments. Further research is needed to determine how important this finding might be in terms of the persuasion process or if the results are an anomaly.

An odd finding emerged for one of the attention to peripheral cues measures (liking kids in the commercial). Subjects exposed to strong arguments (M = 3.85) liked the kids in the commercial more than subjects exposed to weak arguments (M = 3.05). However, both groups had neutral or fairly weak feelings about the kids in the

commercial. One explanation for the finding is that subjects exposed to weak arguments may have had an overall negative feeling toward the commercial. However, there was no difference among the two groups for announcer credibility; therefore, this finding could be an aberration.

Study Limitations

The Manipulations

The manipulation checks for media literacy training and number of arguments were not successful. This poses a problem because there is no statistical evidence to suggest that exposure to the manipulations actually made a difference among the groups of subjects.

Media literacy training. Although the media literacy training lesson was pretested with children of the same age group, it was not as effective as expected. One reason for the lack of effectiveness might be the setting of the lesson for the fourth graders (n = 90). The only room available for the lesson at the time was a large room without desks. Subjects sat very close to one another on the floor. Many of the examples used in the lesson initiated enthusiastic reactions, which included laughing, shouting, and physical movement. Such reactions led to increased energy and restlessness. Several subjects moved (e.g., walked or crawled) around the room despite being reprimanded by the experimenter for doing so. Four subjects had to be separated for continuous talking and physical contact. Therefore, the lack of a traditional classroom setting may have contributed to the subjects' lack of attention to the lesson. In addition, a regular classroom teacher was not present during the presentation by the experimenter. All of the

teachers were monitoring control group subjects in their respective classrooms. The presence of a teacher might have alleviated behavioral problems and helped focus students' attention. Fifth graders (n=58) were exposed to the lesson seated at desks with a teacher present.

Another explanation for the unsuccessful manipulation is the single exposure to the lesson. Ideally, media literacy training should be an on-going process. However, scheduling restraints limited the amount of time that could be spent with the students. A future study should expose the students to media literacy training more than once. Multiple exposures would be more like typical lessons taught in other subjects. Teachers typically spend several class periods on various units.

An additional explanation deals with the length of the lesson. Subjects were taught media literacy training skills for 50-60 minutes. Perhaps an hour-long lesson for fourth and fifth graders is too long. Shorter lessons, but more frequent lessons, might have been more effective. Furthermore, if the lecture/discussion had been coupled with an activity the manipulation might have been more successful.

A further explanation focuses on the questionnaire items. Although the scale items were directly related to the content of the lesson, the scale had not been previously tested. Factor analysis revealed that two dimensions were being measured by the scale items. Further testing is needed to develop a valid and reliable manipulation check.

A final explanation is that media literacy training does not work within the context used in this study. Media literacy training may not be an effective moderating variable of persuasion within the ELM. One could argue that the media literacy training lesson did not provide the ability necessary to produce central processing within subjects.

Furthermore, the video used in the lesson was designed as a children's survival guide to advertising. The need to have a survival guide to advertising implies that advertising is inherently negative; this implication is clear in the video because it points out the "tricks" that advertisers use to sell products. Thus, the lesson may have trained subjects to be skeptics of advertising rather than more responsible consumers. Further testing of the lesson is needed to determine if content variations produce different results.

Number of arguments. There are two possible explanations for the unsuccessful manipulation of number of arguments. First, the two-item scale that asked subjects about the number of arguments in the Pringles commercial were ambiguous. The two items asked if there were many or few arguments in the commercial. A more appropriate measure would have been a single self-report measure. Subjects could have been asked, "How many arguments were in the commercial you just saw?" This would have been more direct and easier to interpret.

The second explanation is that subjects may not have experience counting arguments in television commercials. Although number of arguments was addressed in the media literacy training lesson, subjects may have had a difficult time distinguishing between all the claims made in the commercial. Previous studies (Petty & Cacioppo, 1984; Petty et al., 1981a) used print advertisements, which made it easier to count the number of arguments.

The Scales

Several of the scales used in the experiment were previously used in other attitude studies. Although these scales were designed for adults, they all had high reliabilities. Problems were encountered with the scales not previously tested. These include the

media literacy training manipulation check (noted above) and the attention to peripheral cues scales. Factor analyses revealed more than one dimension being measured by the items in the scales. Further scale development and testing is necessary to identify valid and reliable scales.

The Subjects

The scales measuring attitude toward advertising in general produced contradictory results. The scale assessing perceptions that TV advertising is deceptive suggested that there were no differences among subjects in the treatment groups (media literacy training or lack thereof). However, the scale assessing perceptions of the personal or social benefits or costs of TV advertising revealed a difference between the two groups. These findings call the equivalency of the two groups into question. As noted in an earlier section, the media literacy training may have influenced the experimental subjects' perceptions of the personal and social benefits or costs of TV advertising by making them even more skeptical of commercial messages and producing more negative attitudes toward advertising. Future studies might employ a pretest-posttest experimental design to eliminate this treatment effect and ensure equivalency among the groups.

Implications

Despite the limitations of the study, the findings suggest that there are potential differences between experimental and control subjects' attitudes toward the advertised product, but definitive conclusions about media literacy training's effectiveness cannot be drawn. However, results of this study can provide a foundation for future research.

First, perhaps the manipulation check for media literacy training worked, but not in the way expected. It was predicted that media literacy training would provide subjects with the ability to scrutinize and evaluate critically commercial messages in a systematic and objective manner. However, the findings suggest that media literacy training may have contributed to more negative attitudes for experimental subjects toward Pringles Potato Chips as well as the commercial. This implies that the media literacy training may make children more skeptical of commercials and products being advertised. The data indicate that all subjects, whether exposed to training or not, perceive advertising to be deceptive. If this is the case, then what purpose does media literacy training serve other than increasing skepticism toward advertising?

It is important for children to learn to question the media messages they encounter; however, media literacy is more than just teaching children to be skeptics. The overall goal of media literacy in terms of advertising is to make children scrutinize advertised messages so that they will become better consumers. If children can become more aware of the persuasive techniques used by advertisers, then they will be able to analyze commercials more critically and make better decisions about products. Moreover, media literacy's overall goal is to equip individuals with critical thinking and viewing skills that will help them evaluate media messages critically as well as help them make other decisions throughout life. Critical thinking has been a staple of education throughout the ages. What has changed over the years is the medium through which educators teach such skills. The printed word was the dominant medium until radio and television developed. Today, media literacy training teaches critical thinking and viewing skills by using all media, whether print or electronic. Children are multimedia

consumers; therefore, it makes sense to use the media they encounter daily to teach them to be critical thinkers. Therefore, it is important that the media literacy training used in this study be revised so that it more accurately teaches critical thinking skills rather than skepticism.

Second, if a single exposure to a media literacy lesson can produce differences among groups as the findings suggest, then media literacy training built into existing school curricula could be very effective at creating critical viewers. Although 48 of the 50 states already have a media literacy component built into their existing curricula (Kubey & Baker, 1999), more efforts need to be made to recognize the benefits of media literacy training on students. This study contributes to the belief that media literacy makes a difference in children's abilities to evaluate media messages more critically, and it can be used as an example of how media literacy equips students with skills that can be used throughout their lives.

Future Research

This study is a foundation for future experimental studies that will test the effectiveness of media literacy training on children's responses to persuasive messages. Given the results of this study, several areas of future research are needed to provide more definitive answers to the research question, "What are the effects of media literacy training on children's attitudes toward persuasive messages?"

Future research must focus on validating the media literacy training manipulation check scale. A study could be designed using the same media literacy lesson and manipulation check scale used in this study. Four groups of subjects could be presented

the lesson and asked to fill out the questionnaire. A fifth group could serve as a control group. Findings would validate the scale and provide evidence of its reliability or suggest that changes need to be made.

A replication of this study is needed to provide statistical evidence that media literacy does work. By replicating the study with valid measures more definitive conclusions can be drawn about the effectiveness of media literacy training. One change that could be made to the study is to make it a pretest-posttest experimental design. This change would provide more support for equivalent groups of subjects at the start of the study. Another change could be to expose subjects to the media literacy lesson more than once. A 4 x 2 x 2 design would be useful to compare control subjects with subjects that are exposed to media literacy training once, for a week, and for two weeks. One would expect larger effects for subjects exposed for two weeks, but it would be interesting to see how great the difference between groups might be. Furthermore, delayed posttest effects could be measured after three months to determine if they were lasting or not. Measuring the delayed effects would also address the contention that persuasion via the central route is more enduring than persuasion via the peripheral route.

The current research takes a step toward producing empirical evidence that suggests media literacy training has an effect on children's attitudes toward persuasive messages. However, additional investigations are needed to answer more completely whether media literacy is a moderating variable within the Elaboration Likelihood Model of persuasion.

APPENDIX A
PARENTAL CONSENT FORM

Parental Consent

Dear Parent/Guardian,

My name is Bradford L. Yates and I am a doctoral candidate in the College of Journalism and Communications at the University of Florida under the supervision of Dr. Debbie Treise, associate professor of advertising, conducting research on television commercials and children's attitudes toward consumer products. The purpose of this research study is to assess the effectiveness of media literacy training on children's responses to commercial advertising. Media literacy training helps students learn to evaluate more critically media messages. The results of this study may help teachers and parents prepare children to evaluate more critically television commercials. These results may not directly help your child today, but may benefit him/her in the future.

Half of the children participating in the study will be taught a media literacy lesson while the other half will watch and discuss an educational program, "Bill Nye the Science Guy," which airs in syndication on selected broadcast channels. These activities will take approximately 45-60 minutes. Children will then watch a commercial and answer several questions about its content, but they do not have to answer any question they do not wish to answer. Trained adult assistants will help your child fill out the questionnaire. This should take about 20 minutes. The activities will take place in the same location (school or community center) your child attends each day. Although the children will be asked to write their names on the questionnaires for matching purposes, their identity will be kept confidential to the extent provided by law. Their names will be replaced with code numbers. Results will only be reported in the form of group data. Participation or non-participation in this study will not affect the children's grades or placement in any programs. Although this project is not part of the regular curriculum or activities, your child will not need to make up any work. Non-participants will watch an age-appropriate video under adult supervision.

You and your child have the right to withdraw consent for your child's participation at any time without consequence. There are no known risks or immediate benefits to the participants. No monetary compensation is offered for participation, but your child will receive a small item (pen or sticker) and a bookmark that highlights key points on how to become more media literate. Group results of this study will be available in May 2000 upon request. Results will be shared with media communication and education scholars at academic conferences and in academic journals. If you have any questions about this research project, please contact me at (352) 376-1874 or my

faculty supervisor, Dr. Treise, at (352) 392-9755. Questions or concerns about research participants' rights may be directed to the UFIRB office, Box 112250, University of Florida, Gainesville, FL 32611-2250; ph: 392-0433.

Sincerely,

Bradford L. Yates

I have read the procedure described above. I voluntarily give my consent for my child, _____, to participate in Bradford L. Yates' study of television commercials and children's attitudes. I have received a copy of this description.

_____ _____

Print Name Signature

_____

Date

Approved by the University of Florida Institutional Review Board for use through September 20, 2000

APPENDIX B
QUESTION GUIDE FOR CONTROL GROUP

Caves

Question Guide for "Bill Nye the Science" video

The following questions are to be used to stimulate discussion about the video. Please allow the students to share their own thoughts about the video as much as possible. Discuss the video for 20-25 minutes.

1. Have any of you ever been in a cave? Allow students to respond. Let's talk about the video you just saw.

2. What is a cave? (Answer: A natural hollow space in the earth)

3. How are caves formed? (Answer: Caves form wherever materials or rock or ice are carried away from an underground space stiff enough to support a roof. There are caves under ice, under water, and underground.)

4. What is limestone? (Answer: It is white chalky rock that is made of ancient seashells. After many years of water flowing through the ground like a river, limestone gets washed away from underneath the surface and a cave forms.)

5. What creatures live in caves? (Answer: Bats, bacteria, fungi, spiders, insects, fish, and amphibians. These creatures don't need light to live and they live mostly in caves.)

6. What is the temperature in caves? (Answer: The temperature is cool and it stays about the same all year round. The weather forecast called for it to be damp, dark, and 12 degrees Celsius.)

7. What are stalactites and stalagmites? (Answer: They are rocks formed by dripping water that is loaded with minerals. It all starts on the surface. Water drips through earth and leaves minerals behind to form stalactites and stalagmites. Stalactites hold tight to the ceiling. Stalagmites might reach the roof from the floor of the cave.)

8. What are Trogloxenes? (Answer: They are cave outsiders or cave guests. These creatures live outside of the cave. Examples include bats, birds such as owls, bears, skunks, and moths. Bats sleep in caves during the day and fly out at night. Bears go into caves in the winter to hibernate (sleep). Birds, skunks, and moths live near the mouth of cave where there is a little bit of light.)

9. What are troglophiles? (Answer: They are cave lovers. These creatures love the deep, dark, wet environment of a cave. Earthworms are troglophiles.)

10. What are troglodytes? (Answer: They are true cave dwellers such as insects, spiders, amphibians, fish, and crustaceans. These creatures can't live anywhere else. They typically have no color and are often blind; some have no eyes at all.)

APPENDIX C
MEDIA LITERACY TRAINING LESSON

Media Literacy Training Lesson

The following outline describes the media literacy training lesson that is the treatment in the proposed experiment. It is hypothesized that subjects exposed to this lesson will have greater ability than subjects not exposed resulting in the greater likelihood that the central route of the ELM will be followed.

Media Literacy Training Defined

For the purposes of this study media literacy training will be operationalized as a lecture and discussion about the persuasive techniques used by advertisers to sell products and how to detect strong and weak arguments in commercials. The lesson will feature video clips from Consumer Reports' *Buy Me That!* series and selected commercials.

Learning Objectives

1. Students will be able to identify persuasive techniques used by advertisers
2. Students will be able to distinguish between strong and weak arguments in commercials

Introduction

The experimenter will begin by introducing him/herself and explain to the students what is going to happen for the next 45-50 minutes. He will introduce the topic by asking the students if they like commercials and what their favorite ones are.

> Do you all like to watch commercials?
> What are some of your favorite commercials?
>
> (Take a few moments and let the students respond)
>
> Today we are going to talk about television commercials and learn about some of the techniques (i.e., methods, ways) advertisers use to make us want the products we see in their ads. Commercials can provide useful and helpful information, but sometimes commercials leave things out about products or mislead us. We need to be able to tell when they are giving us good information and when they leave

things out. One way to help us be more aware is to understand how advertisers persuade or convince us to buy their products.
We already know about some of the techniques (ways) advertisers use to persuade us to buy their products because we use them ourselves. Think about this: If you want your parents to buy you a Christmas gift don't you tell them about the best features of the toy and how great it will be for you to have it? You might even say that everyone else has it so you have to have it, too. Well, advertisers do the same thing when they try to persuade or convince us to buy their products. They tell us how great their products are and how wonderful we will feel if we use their products. So, they are no different from you and I when we try to convince someone to buy us something or do something for us. Therefore, since you already know about some of the methods (ways) that can be used to persuade, then you should be able to identify those techniques (ways) in commercials and make better decisions when you buy things. Let's talk about some of these techniques so you can look out for them when you watch commercials.
Remember, the more you know about commercials, the better chance you have of choosing the right products to buy and use.

The experimenter will then play a brief montage of commercials and kids' reactions from the Consumer Reports' video, *Buy Me That Too!* as an attention-getting device. (Video clip includes the montage of commercials and kids' reactions as well as a closer look at the Typhoon II remote controlled car commercial). After the video, the experimenter will ask the students the following questions and take a few minutes to listen to responses.

What do you think about the Typhoon II after seeing the video clip?
What were some of the persuasive techniques (or ways) the advertiser used to make the Typhoon II look so appealing?
(Take a few moments and let the students respond)

Persuasive Techniques: Part I

The next segment will begin with edited clips from *Buy Me That!* and *Buy Me That 3!*, plus a Trix cereal commercial. The first part of the clip explores how advertisers sell cereal and uncovers some of the things advertisers do not include in their commercials (e.g., how much sugar is in cereal). The second part of the clip is a series of children's head bites talking about cereal commercials and the nutritious value of advertised cereals. The third segment is a Trix cereal commercial.

Do you eat Candy for Breakfast? Watch this video clip and then listen to what other kids have to say about cereal commercials.
(Show video).
Well, what did you see in that clip?
(Take a few moments and let the students respond)

Let's look at a Trix cereal commercial.

Did you hear the man say "A fruity part of a good breakfast, too"?

So, you learned that even though the commercial says the cereal is part of a balanced breakfast, we don't even have to eat the cereal to have a nutritious breakfast, right?
Well, this is just one example of the arguments (or claims) advertisers try and use to get us to want their products.

Do you all know what an argument is? It is very important to understand this. Well, in terms of commercials, an argument (or claim) is a statement (or just a few words) that is used to make you like the product and hopefully buy it. For example, "Trix are for kids" and "A fruity part of a good breakfast."

I am going to play you a commercial, and I want you to look for arguments or claims made about the product.
(Show Tartar Control Listerine commercial)

So, what are some of the arguments or claims made in this commercial?
(Take a few moments and let students respond. Write their responses on a chalkboard)

Very good! You have listed (#) arguments in the commercial. Do you think it is better to have lots of arguments in the commercial or is it better to have just a few?
(Allow students to respond)
Well, lots of arguments can be good, but what if the arguments are not strong ones? Would it be better to have a few really strong claims about the product rather than lots of very weak ones?

Let's look at the claims I found in the Tartar Control Listerine commercial to help us answer these questions.
Here are the ones I came up with. The commercial claimed that Tartar Control Listerine

1) Is new
2) Is the only mouthwash that helps fight tartar build up
3) Has the same germ killing power as regular Listerine
4) Kills germs that cause bad breath, plague, and the gum disease gingivitis
5) Is better than brushing alone (when compared to regular toothpaste)
6) What brushing starts, (Tartar Control) Listerine finishes

Can we be sure these arguments are strong ones?
How do we know that Control Tartar Listerine fights tartar build up?
Does the commercial have evidence to back up its claim? (Does it show several sets of teeth that have less tartar as a result of Tartar Control Listerine?)
How can we be sure it kills germs that cause bad breath, plague, and gingivitis?
What about our tooth paste? Isn't that enough?

Notice the hard-to-see graphic "When brushing and flossing regularly isn't enough"

(Allow students to respond to these queries, then show another commercial and encourage them to think about how strong the claims are as they scrutinize the advertisement)

Let's watch another commercial. This time pay close attention to the claims being made in the commercial and try and figure out if they are really strong arguments (claims) or pretty weak ones. Also, pay attention to how many claims are made. (Show Swiffer Sweeper commercial)

What were the claims the advertiser made about the Swiffer sweeper?
Were they strong claims or weak claims?
How many claims were made?
(Allow students to respond to these questions)

Swiffer Sweeper commercial claims
1) Simple to assemble (easy to use)
2) Built to last (strong and durable)
3) Slides and glides as it sweeps (easy to use)
4) Electrostatic action to attract and trap hair, crumbs, and common allergies
5) Toss the cloth (disposable...not a lot of extra work to use it)
6) Swiffer's the one, consider it done (meaning swiffer is all that you need)

Let's take a look at another commercial.

Tyco R/C Tantrum commercial claims
1) It smashes
2) It crashes
3) The meanest stunt machine you've ever seen
4) It has cyclone steering
5) It can do out of control stunts
6) You control it
7) It can do bone-breaking back flips
8) It is unstoppable
9) It has airborne twister action
10) The madder it gets the badder it gets, until it throws an all out tantrum
11) Use Tyco 6.0 V premium pack for maximum stunt power
12) Maximum heat
13) Battery pack sold separately

This commercial has lots of claims in it, but they are rather weak. Did you notice the other techniques (ways) the advertiser used to make the Tantrum seem really exciting and cool? What were some of those techniques (ways)? (Allow students to respond).

Let's look at the commercial again. Listen to the driving (upbeat) music and how quickly the man speaks. Notice the quick cuts (a way of editing pictures together) from one scene to another. The commercial is very up beat and exciting, which makes you believe that the Tantrum will be just as exciting.

This commercial is a great example of how advertisers use other persuasive techniques (methods) to convince us to buy their products. The claims about the Tantrum are not very strong, so the advertiser decided to use special editing and cool camera angles to make the Tantrum seem like a great toy. This remote controlled toy is probably not that different from other remote controlled toys, so the advertiser tries to use these special TV techniques (fancy editing and neat camera angles) to make the Tantrum seem better than other remote controlled toys.

Did the Trix, Listerine, and Swiffer Sweeper commercials use some of the techniques we identified in the Tantrum commercial? (Allow students to respond. Reinforce how other techniques (methods) can be used to persuade with or without arguments.)
So, what have we learned so far about advertisers and commercials?
We've learned that advertisers make arguments or claims about their products in the hope that we will believe their claims and buy their products. They are trying to convince us that their products are the best. We've also learned that there can be strong arguments and weak arguments. In addition, we have learned that commercials use other persuasive techniques with or without arguments. As commercial watchers and product buyers we need to pay close attention to the arguments in commercials and to the other persuasive techniques (e.g., music, quick cuts, colors, pacing) so we can make wise decisions about the products we buy and ask our parents to buy.

Persuasive Techniques: Part II

This segment will focus on more methods (peripheral cues) besides arguments that advertisers use to help sell products. The segment begins with a McDonald's commercial featuring baseball slugger, Mark McGwire. The commercial opens up the discussion about celebrity endorsers. Following the McDonald's ad, a clip from *Buy Me That 3!* that deals with commercials about sports drinks will be shown. One of the key points of the video clip is that sports drinks are often endorsed by star athletes, which implies that whoever drinks the product will perform like the celebrity athletes.

We know that commercials make claims about products, but are we always told what those claims are?
(Show McDonald's commercial featuring Mark McGwire)
What does it mean when you see Mark McGwire of the St. Louis Cardinals in a McDonald's commercial?
(Take a moment to let the students respond)

That's right. We might think that if we eat at McDonald's we would be able to hit a baseball like Mark McGwire. I know it hasn't worked for me. Take a look at this short video clip.
(Show video clip from *Buy Me That 3!*)

What did the video clip show us?
(Allow students to respond)

I drink Gatorade all the time, but I can't play basketball like Michael Jordan. It is important for us to know that just because a celebrity is in a commercial it does not mean that we will be like that individual if we wear the same shoes or drink the same drink.

Michael Jordan has several commercials. Let's look at one of them.
(Show Michael Jordan's MCI Long Distance)

Michael Jordan is connected to a lot of products. Can you name some others? McDonald's, Gatorade, Nike, Hanes, Michael Jordan cologne, Ray-o-vac batteries?
Why do you think Michael Jordan is in so many commercials?
(Allow students to respond)
Michael Jordan is one of the most well known individuals in the world. Since most of us recognize him and like him, advertisers believe we would want to use the same products he does. But, we know that just because we use the same products as Michael, we "won't be like Mike." We will still be who we are. So, when you watch commercials, be aware that celebrities are in them for a reason.

As we discussed earlier, advertisers use other techniques (methods) to get us to buy products. They use really pretty girls and handsome boys. They use flashy images, quick cuts, catchy music, and even humor. They also make the setting or environment look really cool. Let's take a look at four commercials and talk about the techniques used to persuade us.
(Show a clip of Pepsi One commercial with Cuba Gooding, Jr.)
(Show Jif peanut butter commercial)
(Show AT&T commercial with David Arquette – Football)
(Show AT&T commercial with David Arquette – Hip-hop, bouncing car)
(Pause in between the commercials and talk about the techniques)

Closing

Now, what have we learned? We've learned that commercials use celebrities to sell their products and they also use quick cuts, eye-catching images, attractive people, catchy music, bright colors, and really nice locations. These techniques (ways or methods) result in implied (i.e., they are not said) claims or arguments about the products in commercials. It is important for us to recognize these techniques and really think about what commercials are saying. Don't just accept

commercials' claims. Be sure to analyze the claims and think about them before deciding to buy products. Pay attention to the other persuasive techniques like quick cuts and bright colors that might be used as well. Here's a little assignment for you...when you watch commercials count the number of claims made and determine if they are strong or weak, just like we did today. Also, identify what other persuasive techniques are being used. It will help you be more media literate. Thank you for your attention.

(At this point, the children will be sent to a screening room where they will see the appropriate version of the manipulated commercial (argument quality x number of arguments))

APPENDIX D
POSTTEST QUESTIONNAIRE

What Do You Think?

I want to know what you think about the commercial you just saw…

There are no right or wrong answers.
Answer the questions as best you can.
Just mark answers that reflect what YOU THINK!

Read and listen to the directions carefully.

Name:_____

School Grade:_____

How old are you?_____

Circle One: **Boy** **Girl**

Circle One: **White** **Black** **Hispanic** **Asian**

Native American **Other**

ID#:_____ **(the number you were given)**

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Wait until you are told to do so

Write down <u>all of the thoughts</u> you had while watching the commercial about Pringles Potato Chips. You will have <u>3</u> minutes. Print your answers. Only write one thought per box. You don't have to use all of the boxes. After the 3 minutes, go back and tell me if your thoughts about the Pringles commercial are GOOD (positive) or BAD (negative) or NOT SURE (undecided). <u>CIRCLE</u> (G) or (B) or (NS) in each box.

	G	**B**	**NS**
	G	**B**	**NS**
	G	**B**	**NS**
	G	**B**	**NS**
	G	**B**	**NS**
	G	**B**	**NS**
	G	**B**	**NS**
	G	**B**	**NS**
	G	**B**	**NS**
	G	**B**	**NS**
	G	**B**	**NS**
	G	**B**	**NS**

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<u>Wait until you are told to do so</u>

Write down as many <u>arguments (claims)</u> that you remember from the Pringles Potato Chips commercial. You will have <u>3</u> minutes. Print your answers. Only write one argument per box. You don't have to use all of the boxes.

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<u>Wait until you are told to do so</u>

Please check the box under the number that best represents how you feel about Pringles Potato Chips based on the commercial you just saw.

Here are what the numbers stand for:

Number **7** means that you have a VERY STRONG FEELING on the positive (good) side
Number **6** means that you have a STRONG FEELING on the positive (good) side
Number **5** means that you have a FAIRLY WEAK FEELING on the positive (good) side
Number **4** means that you have a NEUTRAL FEELING (undecided) one way or the other
Number **3** means that you have a FAIRLY WEAK FEELING on the negative (bad) side
Number **2** means that you have a STRONG FEELING on the negative (bad) side
Number **1** means that you have a VERY STRONG FEELING on the negative (bad) side

What do you think about Pringles Potato Chips based on the commercial you just saw? (Check one box on each line to indicate what you think)

	1	2	3	4	5	6	7	
Bad	❑	❑	❑	❑	❑	❑	❑	Good
Unfavorable	❑	❑	❑	❑	❑	❑	❑	Favorable
Disagreeable	❑	❑	❑	❑	❑	❑	❑	Agreeable
Unpleasant	❑	❑	❑	❑	❑	❑	❑	Pleasant
Negative	❑	❑	❑	❑	❑	❑	❑	Positive
Dislike	❑	❑	❑	❑	❑	❑	❑	Like
Useless	❑	❑	❑	❑	❑	❑	❑	Useful
Not beneficial	❑	❑	❑	❑	❑	❑	❑	Beneficial
Low quality	❑	❑	❑	❑	❑	❑	❑	High quality
Worthless	❑	❑	❑	❑	❑	❑	❑	Valuable

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Wait until you are told to do so

Please check the box under the number that best describes the commercial you just saw. (For example, if you think the ad is extremely believable, check 7. If you think the ad is not at all believable, check 1). Be sure to think about the COMMERCIAL, NOT THE PRODUCT.

Here are what the numbers stand for:

Number **7** means that you have a VERY STRONG FEELING on the positive (good) side
Number **6** means that you have a STRONG FEELING on the positive (good) side
Number **5** means that you have a FAIRLY WEAK FEELING on the positive (good) side
Number **4** means that you have a NEUTRAL FEELING (undecided) one way or the other
Number **3** means that you have a FAIRLY WEAK FEELING on the negative (bad) side
Number **2** means that you have a STRONG FEELING on the negative (bad) side
Number **1** means that you have a VERY STRONG FEELING on the negative (bad) side

What do you think about the COMMERCIAL you just saw? (Check one box on each line to indicate what you think)

	1	2	3	4	5	6	7	
Not believable	❑	❑	❑	❑	❑	❑	❑	Believable
Not for me	❑	❑	❑	❑	❑	❑	❑	For me
Not informative	❑	❑	❑	❑	❑	❑	❑	Informative
Not interesting	❑	❑	❑	❑	❑	❑	❑	Interesting
Irritating	❑	❑	❑	❑	❑	❑	❑	Not irritating
Not meaningful	❑	❑	❑	❑	❑	❑	❑	Meaningful
Pbony	❑	❑	❑	❑	❑	❑	❑	Not phony
Ridiculous	❑	❑	❑	❑	❑	❑	❑	Not ridiculous
Terrible	❑	❑	❑	❑	❑	❑	❑	Not terrible
Not worth remembering	❑	❑	❑	❑	❑	❑	❑	Worth remembering
Did not like ad	❑	❑	❑	❑	❑	❑	❑	Liked ad
Did not enjoy ad	❑	❑	❑	❑	❑	❑	❑	Enjoyed ad
Did not find ad to be good	❑	❑	❑	❑	❑	❑	❑	Found ad to be good

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Wait until you are told to do so

Please check the box under the number that best represents how much you agree or disagree with the following statements about TV advertising (commercials) in general.

Here are what the numbers stand for:

Number **7** means that you have a VERY STRONG FEELING on the positive (good) side
Number **6** means that you have a STRONG FEELING on the positive (good) side
Number **5** means that you have a FAIRLY WEAK FEELING on the positive (good) side
Number **4** means that you have a NEUTRAL FEELING (undecided) one way or the other
Number **3** means that you have a FAIRLY WEAK FEELING on the negative (bad) side
Number **2** means that you have a STRONG FEELING on the negative (bad) side
Number **1** means that you have a VERY STRONG FEELING on the negative (bad) side

TV advertising is a good way to learn about what products and services are available.

	1	2	3	4	5	6	7	
Disagree	❑	❑	❑	❑	❑	❑	❑	Agree

TV advertising results in better products for you and your family.

	1	2	3	4	5	6	7	
Disagree	❑	❑	❑	❑	❑	❑	❑	Agree

In general, TV advertising presents a true picture of the product advertised.

	1	2	3	4	5	6	7	
Disagree	❑	❑	❑	❑	❑	❑	❑	Agree

You can trust product brands advertised on TV more than product brands not advertised on TV.

	1	2	3	4	5	6	7	
Disagree	❑	❑	❑	❑	❑	❑	❑	Agree

TV advertisements help me find products that match my personality and interest.

	1	2	3	4	5	6	7	
Disagree	❑	❑	❑	❑	❑	❑	❑	Agree

TV advertising helps me know which product brands have the qualities or features I am looking for.

	1	2	3	4	5	6	7	
Disagree	❑	❑	❑	❑	❑	❑	❑	Agree

TV advertising gives me a good idea about products by showing the kinds of people who use them.

	1	2	3	4	5	6	7	
Disagree	❑	❑	❑	❑	❑	❑	❑	Agree

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TV advertising helps me buy the best product for the price.

	1	2	3	4	5	6	7	
Disagree	❑	❑	❑	❑	❑	❑	❑	Agree

I am willing to pay more for a product that is advertised on TV.

	1	2	3	4	5	6	7	
Disagree	❑	❑	❑	❑	❑	❑	❑	Agree

Most TV ads today are not about products themselves, but just make me feel a certain way (e.g., happy, excited, good).

	1	2	3	4	5	6	7	
Disagree	❑	❑	❑	❑	❑	❑	❑	Agree

Today's TV ads don't give you as much information as they could.

	1	2	3	4	5	6	7	
Disagree	❑	❑	❑	❑	❑	❑	❑	Agree

Today's TV ads tell you more about the people who use a product than about what the product does for you.

	1	2	3	4	5	6	7	
Disagree	❑	❑	❑	❑	❑	❑	❑	Agree

Most TV ads try to work on (affect) people's emotions (feelings).

	1	2	3	4	5	6	7	
Disagree	❑	❑	❑	❑	❑	❑	❑	Agree

There is a critical need for more truth in today's TV advertising.

	1	2	3	4	5	6	7	
Disagree	❑	❑	❑	❑	❑	❑	❑	Agree

TV commercials do not show life as it really is.

	1	2	3	4	5	6	7	
Disagree	❑	❑	❑	❑	❑	❑	❑	Agree

TV advertising mostly tries to create small differences between products that are a lot alike.

	1	2	3	4	5	6	7	
Disagree	❑	❑	❑	❑	❑	❑	❑	Agree

Turn to Next Page →☺
Wait until you are told to do so

Please check the box under the number that best represents how much you agree or disagree with the following statements.

Here are what the numbers stand for:

Number 7 means that you have a VERY STRONG FEELING on the positive (good) side
Number 6 means that you have a STRONG FEELING on the positive (good) side
Number 5 means that you have a FAIRLY WEAK FEELING on the positive (good) side
Number 4 means that you have a NEUTRAL FEELING (undecided) one way or the other
Number 3 means that you have a FAIRLY WEAK FEELING on the negative (bad) side
Number 2 means that you have a STRONG FEELING on the negative (bad) side
Number 1 means that you have a VERY STRONG FEELING on the negative (bad) side

Advertisers use some of the same persuasive methods (ways) to convince us to buy products that we use to convince people to do things for us.

	1	2	3	4	5	6	7	
Disagree	❑	❑	❑	❑	❑	❑	❑	Agree

Through editing, which is cutting from one picture to another, advertisers put pictures of products together so they look really good and make us want them.

	1	2	3	4	5	6	7	
Disagree	❑	❑	❑	❑	❑	❑	❑	Agree

Commercials use interesting camera angles to make products look better than they really do.

	1	2	3	4	5	6	7	
Disagree	❑	❑	❑	❑	❑	❑	❑	Agree

Advertisers sometimes make commercials funny so we will be in a good mood (we feel happy) when we think about the products.

	1	2	3	4	5	6	7	
Disagree	❑	❑	❑	❑	❑	❑	❑	Agree

Commercials use bright colors to make products stand out so we will notice them in stores.

	1	2	3	4	5	6	7	
Disagree	❑	❑	❑	❑	❑	❑	❑	Agree

TV commercials make weak and strong claims about products.

	1	2	3	4	5	6	7	
Disagree	❑	❑	❑	❑	❑	❑	❑	Agree

Turn to Next Page →☺

Advertisers try to make products that are a lot alike seem different by showing them being used by attractive (pretty) people in really cool (nice) places.

	1	2	3	4	5	6	7	
Disagree	❑	❑	❑	❑	❑	❑	❑	Agree

TV commercials make you believe that you will be like the person in the commercial if you use the product he/she does.

	1	2	3	4	5	6	7	
Disagree	❑	❑	❑	❑	❑	❑	❑	Agree

TV commercials persuade us to buy products in lots of ways.
Which of the following ways (methods) are used in TV commercials?

Quick edits (cut from one picture to another really fast)

	1	2	3	4	5	6	7	
Disagree	❑	❑	❑	❑	❑	❑	❑	Agree

Bad language

	1	2	3	4	5	6	7	
Disagree	❑	❑	❑	❑	❑	❑	❑	Agree

Catchy music

	1	2	3	4	5	6	7	
Disagree	❑	❑	❑	❑	❑	❑	❑	Agree

Ugly people

	1	2	3	4	5	6	7	
Disagree	❑	❑	❑	❑	❑	❑	❑	Agree

Humor (make us laugh)

	1	2	3	4	5	6	7	
Disagree	❑	❑	❑	❑	❑	❑	❑	Agree

Arguments

	1	2	3	4	5	6	7	
Disagree	❑	❑	❑	❑	❑	❑	❑	Agree

Mad people

	1	2	3	4	5	6	7	
Disagree	❑	❑	❑	❑	❑	❑	❑	Agree

Famous people

	1	2	3	4	5	6	7	
Disagree	❑	❑	❑	❑	❑	❑	❑	Agree

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Wait until you are told to do so

Please check the box under the number that best represents how much you agree or disagree with the following statements about the Pringles Potato Chips commercial you just saw.

Here are what the numbers stand for:

Number **7** means that you have a VERY STRONG FEELING on the positive (good) side
Number **6** means that you have a STRONG FEELING on the positive (good) side
Number **5** means that you have a FAIRLY WEAK FEELING on the positive (good) side
Number **4** means that you have a NEUTRAL FEELING (undecided) one way or the other
Number **3** means that you have a FAIRLY WEAK FEELING on the negative (bad) side
Number **2** means that you have a STRONG FEELING on the negative (bad) side
Number **1** means that you have a VERY STRONG FEELING on the negative (bad) side

The commercial presented many (a lot of) reasons (arguments/claims) for eating Pringles Potato Chips.

	1	2	3	4	5	6	7	
Disagree	❑	❑	❑	❑	❑	❑	❑	Agree

The commercial presented few (not a lot of) reasons (arguments/claims) for eating Pringles Potato Chips.

	1	2	3	4	5	6	7	
Disagree	❑	❑	❑	❑	❑	❑	❑	Agree

I like the kids in the commercial for Pringles Potato Chips.

	1	2	3	4	5	6	7	
Disagree	❑	❑	❑	❑	❑	❑	❑	Agree

I would like to be friends with the kids in the commercial for Pringles Potato Chips.

	1	2	3	4	5	6	7	
Disagree	❑	❑	❑	❑	❑	❑	❑	Agree

I have friends like the kids in the commercial for Pringles Potato Chips.

	1	2	3	4	5	6	7	
Disagree	❑	❑	❑	❑	❑	❑	❑	Agree

The kids in the commercial for Pringles Potato Chips are attractive (pretty/handsome).

	1	2	3	4	5	6	7	
Disagree	❑	❑	❑	❑	❑	❑	❑	Agree

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The man in the commercial, whose voice you heard, knows a lot about Pringles Potato Chips.

	1	2	3	4	5	6	7	
Disagree	❑	❑	❑	❑	❑	❑	❑	Agree

I believe what the man in the commercial said about Pringles Potato Chips.

	1	2	3	4	5	6	7	
Disagree	❑	❑	❑	❑	❑	❑	❑	Agree

The man in the commercial for Pringles Potato Chips is telling the truth.

	1	2	3	4	5	6	7	
Disagree	❑	❑	❑	❑	❑	❑	❑	Agree

Turn to Next Page →☺

Wait until you are told to do so

Please check the box under the number to indicate how persuasive you think the Pringles Potato Chips commercial was. Persuasive means the commercial made convincing arguments about Pringles Potato Chips.

Here are what the numbers stand for:

Number **7** means that you have a VERY STRONG FEELING on the positive (good) side
Number **6** means that you have a STRONG FEELING on the positive (good) side
Number **5** means that you have a FAIRLY WEAK FEELING on the positive (good) side
Number **4** means that you have a NEUTRAL FEELING (undecided) one way or the other
Number **3** means that you have a FAIRLY WEAK FEELING on the negative (bad) side
Number **2** means that you have a STRONG FEELING on the negative (bad) side
Number **1** means that you have a VERY STRONG FEELING on the negative (bad) side

How persuasive was the commercial for Pringles Potato Chips? (Check one box on each line to indicate what you think)

	1	2	3	4	5	6	7	
Doesn't make me want Pringles	❑	❑	❑	❑	❑	❑	❑	Makes me want Pringles
Doesn't make sense	❑	❑	❑	❑	❑	❑	❑	Makes sense
Not believable	❑	❑	❑	❑	❑	❑	❑	Believable
Weak	❑	❑	❑	❑	❑	❑	❑	Strong

Did you see the video of Bill Nye the Science Guy today? (Circle one)

Yes **No**

Stop! Good Job! ☺

APPENDIX E
PRETEST QUESTIONNAIRE FOR PRODUCT OF INTEREST

What Do You Think?

I want to know what you think about certain products…
If you want to tell me what you think, please fill in the blanks below.

Name:_____

School Grade:_____

How Old Are You?_____

Boy or Girl:_____

ID #:_____

There are no right or wrong answers. Just circle the number you think best represents how you feel. Here's what you should do.

Circle the number that best represents how you feel about each product. See example below.

Snack Cakes

Bad					**Good**		**Unfavorable**					**Favorable**	
1	2	3	(4)	5	6	7	1	2	3	4	(5)	6	7

You will also Circle the number that best represents how much you agree or disagree with 6 sentences about each product. See example.

When other people see me eating Snack Cakes, they thiak of me in a certain way.

Disagree				Agree		
1	(2)	3	4	5	6	7

Let's do one for practice together! ☺

Turn to the next page.

Example: Snack Cakes

Circle the number that best represents how you feel about the product listed above.

Bad **Good**

1 2 3 4 5 6 7

Unfavorable **Favorable**

1 2 3 4 5 6 7

Disagreeable **Agreeable**

1 2 3 4 5 6 7

Unpleasant **Pleasant**

1 2 3 4 5 6 7

Negative **Positive**

1 2 3 4 5 6 7

Dislike **Like**

1 2 3 4 5 6 7

Go to Top of Next Column →

Circle the number that best represents how much you agree or disagree with the sentences below.

When other people see me eating Snack Cakes, they think of me in a certain way.

Disagree Agree

1 2 3 4 5 6 7

You can tell a lot about a person by seeing what brand of Snack Cakes he/she eats.

Disagree Agree

1 2 3 4 5 6 7

Snack Cakes help me express who I am.

Disagree Agree

1 2 3 4 5 6 7

Snack Cakes are "me".

Disagree Agree

1 2 3 4 5 6 7

Seeing somebody else eat Snack Cakes tells me a lot about that person.

Disagree Agree

1 2 3 4 5 6 7

When I eat Snack Cakes, others see me the way I want them to see me.

Disagree Agree

1 2 3 4 5 6 7

Next Page →☺

1. Sneakers/Athletic Shoes

Circle the number that best represents how you feel about the product listed above.

Bad **Good**

1 2 3 4 5 6 7

Unfavorable **Favorable**

1 2 3 4 5 6 7

Disagreeable **Agreeable**

1 2 3 4 5 6 7

Unpleasant **Pleasant**

1 2 3 4 5 6 7

Negative **Positive**

1 2 3 4 5 6 7

Dislike **Like**

1 2 3 4 5 6 7

Go to Top of Next Column →

Circle the number that best represents how much you agree or disagree with the sentences below.

When other people see me wearing Sneakers, they think of me in a certain way.

Disagree Agree

1 2 3 4 5 6 7

You can tell a lot about a person by seeing what brand of Sneakers he/she wears.

Disagree Agree

1 2 3 4 5 6 7

Sneakers help me express who I am.

Disagree Agree

1 2 3 4 5 6 7

Sneakers are "me".

Disagree Agree

1 2 3 4 5 6 7

Seeing somebody else wear Sneakers tells me a lot about that person.

Disagree Agree

1 2 3 4 5 6 7

When I wear Sneakers, others see me the way I want them to see me.

Disagree Agree

1 2 3 4 5 6 7

Next Page →☺

2. Video Games

Circle the number that best represents how you feel about the product listed above.

Bad **Good**

1 2 3 4 5 6 7

Unfavorable **Favorable**

1 2 3 4 5 6 7

Disagreeable **Agreeable**

1 2 3 4 5 6 7

Unpleasant **Pleasant**

1 2 3 4 5 6 7

Negative **Positive**

1 2 3 4 5 6 7

Dislike **Like**

1 2 3 4 5 6 7

Go to Top of Next Column →

Circle the number that best represents how much you agree or disagree with the sentences below.

When other people see me playing Video Games, they think of me in a certain way.

Disagree Agree

1 2 3 4 5 6 7

You can tell a lot about a person by seeing what Video Games he/she plays.

Disagree Agree

1 2 3 4 5 6 7

Video Games help me express who I am.

Disagree Agree

1 2 3 4 5 6 7

Video Games are "me".

Disagree Agree

1 2 3 4 5 6 7

Seeing somebody else play Video Games tells me a lot about that person.

Disagree Agree

1 2 3 4 5 6 7

When I play Video Games, others see me the way I want them to see me.

Disagree Agree

1 2 3 4 5 6 7

Next Page →☺

3. Cereal

Circle the number that best represents how you feel about the product listed above.

Bad **Good**

1 2 3 4 5 6 7

Unfavorable **Favorable**

1 2 3 4 5 6 7

Disagreeable **Agreeable**

1 2 3 4 5 6 7

Unpleasant **Pleasant**

1 2 3 4 5 6 7

Negative **Positive**

1 2 3 4 5 6 7

Dislike **Like**

1 2 3 4 5 6 7

Go to Top of Next Column →

Circle the number that best represents how much you agree or disagree with the sentences below.

When other people see me eating Cereal, they think of me in a certain way.

Disagree Agree

1 2 3 4 5 6 7

You can tell a lot about a person by seeing what kind of Cereal he/she eats.

Disagree Agree

1 2 3 4 5 6 7

Cereal helps me express who I am.

Disagree Agree

1 2 3 4 5 6 7

Cereal is "me".

Disagree Agree

1 2 3 4 5 6 7

Seeing somebody else eat Cereal tells me a lot about that person.

Disagree Agree

1 2 3 4 5 6 7

When I eat Cereal, others see me the way I want them to see me.

Disagree Agree

1 2 3 4 5 6 7

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4. Pizza

Circle the number that best represents how you feel about the product listed above.

Bad **Good**

1 2 3 4 5 6 7

Unfavorable **Favorable**

1 2 3 4 5 6 7

Disagreeable **Agreeable**

1 2 3 4 5 6 7

Unpleasant **Pleasant**

1 2 3 4 5 6 7

Negative **Positive**

1 2 3 4 5 6 7

Dislike **Like**

1 2 3 4 5 6 7

Go to **Top** of **Next Column** →

Circle the number that best represents how much you agree or disagree with the sentences below.

When other people see me eating Pizza, they think of me in a certain way.

Disagree Agree

1 2 3 4 5 6 7

You can tell a lot about a person by seeing what kind of Pizza he/she eats.

Disagree Agree

1 2 3 4 5 6 7

Pizza helps me express who I am.

Disagree Agree

1 2 3 4 5 6 7

Pizza is "me".

Disagree Agree

1 2 3 4 5 6 7

Seeing somebody else eat Pizza tells me a lot about that person.

Disagree Agree

1 2 3 4 5 6 7

When I eat Pizza, others see me the way I want them to see me.

Disagree Agree

1 2 3 4 5 6 7

Next Page →☺

5. Candy

Circle the number that best represents how you feel about the product listed above.

Bad **Good**

1 2 3 4 5 6 7

Unfavorable **Favorable**

1 2 3 4 5 6 7

Disagreeable **Agreeable**

1 2 3 4 5 6 7

Unpleasant **Pleasant**

1 2 3 4 5 6 7

Negative **Positive**

1 2 3 4 5 6 7

Dislike **Like**

1 2 3 4 5 6 7

Go to Top of Next Column →

Circle the number that best represents how much you agree or disagree with the sentences below.

When other people see me eating Candy, they think of me in a certain way.

Disagree Agree

1 2 3 4 5 6 7

You can tell a lot about a person by seeing what kind of Candy he/she eats.

Disagree Agree

1 2 3 4 5 6 7

Candy helps me express who I am.

Disagree Agree

1 2 3 4 5 6 7

Candy is "me".

Disagree Agree

1 2 3 4 5 6 7

Seeing somebody else eat Candy tells me a lot about that person.

Disagree Agree

1 2 3 4 5 6 7

When I eat Candy, others see me the way I want them to see me.

Disagree Agree

1 2 3 4 5 6 7

Next Page →☺

6. Chewing Gum

Circle the number that best represents how you feel about the product listed above.

Bad **Good**

1 2 3 4 5 6 7

Unfavorable **Favorable**

1 2 3 4 5 6 7

Disagreeable **Agreeable**

1 2 3 4 5 6 7

Unpleasant **Pleasant**

1 2 3 4 5 6 7

Negative **Positive**

1 2 3 4 5 6 7

Dislike **Like**

1 2 3 4 5 6 7

Go to Top of Next Column →

Circle the number that best represents how much you agree or disagree with the sentences below.

When other people see me with Chewing Gum, they think of me in a certain way.

Disagree Agree

1 2 3 4 5 6 7

You can tell a lot about a person by seeing what kind of Chewing Gum he/she chews.

Disagree Agree

1 2 3 4 5 6 7

Chewing Gum helps me express who I am.

Disagree Agree

1 2 3 4 5 6 7

Chewing Gum is "me".

Disagree Agree

1 2 3 4 5 6 7

Seeing somebody else chew Chewing Gum tells me a lot about that person.

Disagree Agree

1 2 3 4 5 6 7

When I chew Chewing Gum, others see me the way I want them to see me.

Disagree Agree

1 2 3 4 5 6 7

Next Page →☺

7. Potato Chips

Circle the number that best represents how you feel about the product listed above.

Bad **Good**

1 2 3 4 5 6 7

Unfavorable **Favorable**

1 2 3 4 5 6 7

Disagreeable **Agreeable**

1 2 3 4 5 6 7

Unpleasant **Pleasant**

1 2 3 4 5 6 7

Negative **Positive**

1 2 3 4 5 6 7

Dislike **Like**

1 2 3 4 5 6 7

Go to Top of Next Column →

Circle the number that best represents how much you agree or disagree with the sentences below.

When other people see me eating Potato Chips, they think of me in a certain way.

Disagree Agree

1 2 3 4 5 6 7

You can tell a lot about a person by seeing what brand of Potato Chips he/she eats.

Disagree Agree

1 2 3 4 5 6 7

Potato Chips help me express who I am.

Disagree Agree

1 2 3 4 5 6 7

Potato Chips are "me".

Disagree Agree

1 2 3 4 5 6 7

Seeing somebody else eat Potato Chips tells me a lot about that person.

Disagree Agree

1 2 3 4 5 6 7

When I eat Potato Chips, others see me the way I want them to see me.

Disagree Agree

1 2 3 4 5 6 7

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8. Soda

Circle the number that best represents how you feel about the product listed above.

Bad **Good**

1 2 3 4 5 6 7

Unfavorable **Favorable**

1 2 3 4 5 6 7

Disagreeable **Agreeable**

1 2 3 4 5 6 7

Unpleasant **Pleasant**

1 2 3 4 5 6 7

Negative **Positive**

1 2 3 4 5 6 7

Dislike **Like**

1 2 3 4 5 6 7

Go to Top of Next Column →

Circle the number that best represents how much you agree or disagree with the sentences below.

When other people see me drinking Soda, they think of me in a certain way.

Disagree Agree

1 2 3 4 5 6 7

You can tell a lot about a person by seeing what brand of Soda he/she drinks.

Disagree Agree

1 2 3 4 5 6 7

Soda helps me express who I am.

Disagree Agree

1 2 3 4 5 6 7

Soda is "me".

Disagree Agree

1 2 3 4 5 6 7

Seeing somebody else drink Soda tells me a lot about that person.

Disagree Agree

1 2 3 4 5 6 7

When I drink Soda, others see me the way I want them to see me.

Disagree Agree

1 2 3 4 5 6 7

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9. Roller Blades

Circle the number that best represents how you feel about the product listed above.

Bad **Good**

1 2 3 4 5 6 7

Unfavorable **Favorable**

1 2 3 4 5 6 7

Disagreeable **Agreeable**

1 2 3 4 5 6 7

Unpleasant **Pleasant**

1 2 3 4 5 6 7

Negative **Positive**

1 2 3 4 5 6 7

Dislike **Like**

1 2 3 4 5 6 7

Go to Top of Next Column →

Circle the number that best represents how much you agree or disagree with the sentences below.

When other people see me using Roller Blades, they think of me in a certain way.

Disagree Agree

1 2 3 4 5 6 7

You can tell a lot about a person by seeing what brand of Roller Blades he/she has.

Disagree Agree

1 2 3 4 5 6 7

Roller Blades help me express who I am.

Disagree Agree

1 2 3 4 5 6 7

Roller Blades are "me".

Disagree Agree

1 2 3 4 5 6 7

Seeing somebody else use Roller Blades tells me a lot about that person.

Disagree Agree

1 2 3 4 5 6 7

When I use Roller Blades, others see me the way I want them to see me.

Disagree Agree

1 2 3 4 5 6 7

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10. Dolls

Circle the number that best represents how you feel about the product listed above.

Bad **Good**

1 2 3 4 5 6 7

Unfavorable **Favorable**

1 2 3 4 5 6 7

Disagreeable **Agreeable**

1 2 3 4 5 6 7

Unpleasant **Pleasant**

1 2 3 4 5 6 7

Negative **Positive**

1 2 3 4 5 6 7

Dislike **Like**

1 2 3 4 5 6 7

Go to Top of Next Column →

Circle the number that best represents how much you agree or disagree with the sentences below.

When other people see me playing with Dolls, they think of me in a certain way.

Disagree Agree

1 2 3 4 5 6 7

You can tell a lot about a person by seeing what Dolls he/she has.

Disagree Agree

1 2 3 4 5 6 7

Dolls help me express who I am.

Disagree Agree

1 2 3 4 5 6 7

Dolls are "me".

Disagree Agree

1 2 3 4 5 6 7

Seeing somebody else play with Dolls tells me a lot about that person.

Disagree Agree

1 2 3 4 5 6 7

When I play with Dolls, others see me the way I want them to see me.

Disagree Agree

1 2 3 4 5 6 7

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11. Action Figures

Circle the number that best represents how you feel about the product listed above.

Bad **Good**

1 2 3 4 5 6 7

Unfavorable **Favorable**

1 2 3 4 5 6 7

Disagreeable **Agreeable**

1 2 3 4 5 6 7

Unpleasant **Pleasant**

1 2 3 4 5 6 7

Negative **Positive**

1 2 3 4 5 6 7

Dislike **Like**

1 2 3 4 5 6 7

Go to Top of Next Column →

Circle the number that best represents how much you agree or disagree with the sentences below.

When other people see me playing with Action Figures, they think of me in a certain way.

Disagree Agree

1 2 3 4 5 6 7

You can tell a lot about a person by seeing what Action Figures he/she has.

Disagree Agree

1 2 3 4 5 6 7

Action Figures help me express who I am.

Disagree Agree

1 2 3 4 5 6 7

Action Figures are "me".

Disagree Agree

1 2 3 4 5 6 7

Seeing somebody else play with Action Figures tells me a lot about that person.

Disagree Agree

1 2 3 4 5 6 7

When I play with Action Figures, others see me the way I want them to see me.

Disagree Agree

1 2 3 4 5 6 7

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12. Stuffed Animals

Circle the number that best represents how you feel about the product listed above.

Bad **Good**

1 2 3 4 5 6 7

Unfavorable **Favorable**

1 2 3 4 5 6 7

Disagreeable **Agreeable**

1 2 3 4 5 6 7

Unpleasant **Pleasant**

1 2 3 4 5 6 7

Negative **Positive**

1 2 3 4 5 6 7

Dislike **Like**

1 2 3 4 5 6 7

Go to Top of Next Column →

Circle the number that best represents how much you agree or disagree with the sentences below.

When other people see me playing with Stuffed Animals, they think of me in a certain way.

Disagree Agree

1 2 3 4 5 6 7

You can tell a lot about a person by seeing what Stuffed Animals he/she has.

Disagree Agree

1 2 3 4 5 6 7

Stuffed Animals help me express who I am.

Disagree Agree

1 2 3 4 5 6 7

Stuffed Animals are "me".

Disagree Agree

1 2 3 4 5 6 7

Seeing somebody else play with Stuffed Animals tells me a lot about that person.

Disagree Agree

1 2 3 4 5 6 7

When I play with Stuffed Animals, others see me the way I want them to see me.

Disagree Agree

1 2 3 4 5 6 7

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13. French Fries

Circle the number that best represents how you feel about the product listed above.

Bad						**Good**
1	2	3	4	5	6	7
Unfavorable						**Favorable**
1	2	3	4	5	6	7
Disagreeable						**Agreeable**
1	2	3	4	5	6	7
Unpleasant						**Pleasant**
1	2	3	4	5	6	7
Negative						**Positive**
1	2	3	4	5	6	7
Dislike						**Like**
1	2	3	4	5	6	7

Go to Top of Next Column →

Circle the number that best represents how much you agree or disagree with the sentences below.

When other people see me eating French Fries, they think of me in a certain way.

Disagree						Agree
1	2	3	4	5	6	7

You can tell a lot about a person by seeing what kind of French Fries he/she eats.

Disagree						Agree
1	2	3	4	5	6	7

French Fries help me express who I am.

Disagree						Agree
1	2	3	4	5	6	7

French Fries are "me".

Disagree						Agree
1	2	3	4	5	6	7

Seeing somebody else eat French Fries tells me a lot about that person.

Disagree						Agree
1	2	3	4	5	6	7

When I eat French Fries, others see me the way I want them to see me.

Disagree						Agree
1	2	3	4	5	6	7

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14. Hamburgers

Circle the number that best represents how you feel about the product listed above.

Bad **Good**

1 2 3 4 5 6 7

Unfavorable **Favorable**

1 2 3 4 5 6 7

Disagreeable **Agreeable**

1 2 3 4 5 6 7

Unpleasant **Pleasant**

1 2 3 4 5 6 7

Negative **Positive**

1 2 3 4 5 6 7

Dislike **Like**

1 2 3 4 5 6 7

Go to Top of Next Column →

Circle the number that best represents how much you agree or disagree with the sentences below.

When other people see me eating Hamburgers, they think of me in a certain way.

Disagree Agree

1 2 3 4 5 6 7

You can tell a lot about a person by seeing what kind of Hamburgers he/she eats.

Disagree Agree

1 2 3 4 5 6 7

Hamburgers help me express who I am.

Disagree Agree

1 2 3 4 5 6 7

Hamburgers are "me".

Disagree Agree

1 2 3 4 5 6 7

Seeing somebody else eat Hamburgers tells me a lot about that person.

Disagree Agree

1 2 3 4 5 6 7

When I eat Hamburgers, others see me the way I want them to see me.

Disagree Agree

1 2 3 4 5 6 7

Next Page →☺

15. Sports Drinks

Circle the number that best represents how you feel about the product listed above.

Bad **Good**

1 2 3 4 5 6 7

Unfavorable **Favorable**

1 2 3 4 5 6 7

Disagreeable **Agreeable**

1 2 3 4 5 6 7

Unpleasant **Pleasant**

1 2 3 4 5 6 7

Negative **Positive**

1 2 3 4 5 6 7

Dislike **Like**

1 2 3 4 5 6 7

Go to Top of Next Column →

Circle the number that best represents how much you agree or disagree with the sentences below.

When other people see me drinking Sports Drinks, they think of me in a certain way.

Disagree Agree

1 2 3 4 5 6 7

You can tell a lot about a person by seeing what kind of Sports Drinks he/she drinks.

Disagree Agree

1 2 3 4 5 6 7

Sports Drinks help me express who I am.

Disagree Agree

1 2 3 4 5 6 7

Sports Drinks are "me".

Disagree Agree

1 2 3 4 5 6 7

Seeing somebody else drink Sports Drinks tells me a lot about that person.

Disagree Agree

1 2 3 4 5 6 7

When I drink Sports Drinks, others see me the way I want them to see me.

Disagree Agree

1 2 3 4 5 6 7

Next Page →☺

16. Board Games

Circle the number that best represents how you feel about the product listed above.

Bad **Good**

1 2 3 4 5 6 7

Unfavorable **Favorable**

1 2 3 4 5 6 7

Disagreeable **Agreeable**

1 2 3 4 5 6 7

Unpleasant **Pleasant**

1 2 3 4 5 6 7

Negative **Positive**

1 2 3 4 5 6 7

Dislike **Like**

1 2 3 4 5 6 7

Go to Top of Next Column →

Circle the number that best represents how much you agree or disagree with the sentences below.

When other people see me playing Board Games, they think of me in a certain way.

Disagree Agree

1 2 3 4 5 6 7

You can tell a lot about a person by seeing what Board Games he/she has.

Disagree Agree

1 2 3 4 5 6 7

Board Games help me express who I am.

Disagree Agree

1 2 3 4 5 6 7

Board Games are "me".

Disagree Agree

1 2 3 4 5 6 7

Seeing somebody else play Board Games tells me a lot about that person.

Disagree Agree

1 2 3 4 5 6 7

When I play Board Games, others see me the way I want them to see me.

Disagree Agree

1 2 3 4 5 6 7

Next Page →☺

17. Yo-yos

Circle the number that best represents how you feel about the product listed above.

Bad						**Good**
1	2	3	4	5	6	7
Unfavorable						**Favorable**
1	2	3	4	5	6	7
Disagreeable						**Agreeable**
1	2	3	4	5	6	7
Unpleasant						**Pleasant**
1	2	3	4	5	6	7
Negative						**Positive**
1	2	3	4	5	6	7
Dislike						**Like**
1	2	3	4	5	6	7

Go to Top of Next Column →

Circle the number that best represents how much you agree or disagree with the sentences below.

When other people see me playing with Yo-yos, they think of me in a certain way.

Disagree						Agree
1	2	3	4	5	6	7

You can tell a lot about a person by seeing what kind of Yo-yos he/she has.

Disagree						Agree
1	2	3	4	5	6	7

Yo-yos help me express who I am.

Disagree						Agree
1	2	3	4	5	6	7

Yo-yos are "me".

Disagree						Agree
1	2	3	4	5	6	7

Seeing somebody else play with Yo-yos tells me a lot about that person.

Disagree						Agree
1	2	3	4	5	6	7

When I play with Yo-yos, others see me the way I want them to see me.

Disagree						Agree
1	2	3	4	5	6	7

Next Page →☺

18. Bicycles

Circle the number that best represents how you feel about the product listed above.

Bad **Good**

1 2 3 4 5 6 7

Unfavorable **Favorable**

1 2 3 4 5 6 7

Disagreeable **Agreeable**

1 2 3 4 5 6 7

Unpleasant **Pleasant**

1 2 3 4 5 6 7

Negative **Positive**

1 2 3 4 5 6 7

Dislike **Like**

1 2 3 4 5 6 7

Go to Top of Next Column →

Circle the number that best represents how much you agree or disagree with the sentences below.

When other people see me riding a Bicycle, they think of me in a certain way.

Disagree Agree

1 2 3 4 5 6 7

You can tell a lot about a person by seeing what kind of Bicycle he/she has.

Disagree Agree

1 2 3 4 5 6 7

Bicycles help me express who I am.

Disagree Agree

1 2 3 4 5 6 7

Bicycles are "me".

Disagree Agree

1 2 3 4 5 6 7

Seeing somebody else ride a Bicycle tells me a lot about that person.

Disagree Agree

1 2 3 4 5 6 7

When I ride a Bicycle, others see me the way I want them to see me.

Disagree Agree

1 2 3 4 5 6 7

Next Page →☺

19. Skateboards

Circle the number that best represents how you feel about the product listed above.

Bad **Good**

1 2 3 4 5 6 7

Unfavorable **Favorable**

1 2 3 4 5 6 7

Disagreeable **Agreeable**

1 2 3 4 5 6 7

Unpleasant **Pleasant**

1 2 3 4 5 6 7

Negative **Positive**

1 2 3 4 5 6 7

Dislike **Like**

1 2 3 4 5 6 7

Go to Top of Next Column →

Circle the number that best represents how much you agree or disagree with the sentences below.

When other people see me riding a Skateboard, they think of me in a certain way.

Disagree Agree

1 2 3 4 5 6 7

You can tell a lot about a person by seeing what kind of Skateboard he/she has.

Disagree Agree

1 2 3 4 5 6 7

Skateboards help me express who I am.

Disagree Agree

1 2 3 4 5 6 7

Skateboards are "me".

Disagree Agree

1 2 3 4 5 6 7

Seeing somebody else ride a Skateboard tells me a lot about that person.

Disagree Agree

1 2 3 4 5 6 7

When I ride a Skateboard, others see me the way I want them to see me.

Disagree Agree

1 2 3 4 5 6 7

Next Page →☺

20. Juice

Circle the number that best represents how you feel about the product listed above.

Bad **Good**

1 2 3 4 5 6 7

Unfavorable **Favorable**

1 2 3 4 5 6 7

Disagreeable **Agreeable**

1 2 3 4 5 6 7

Unpleasant **Pleasant**

1 2 3 4 5 6 7

Negative **Positive**

1 2 3 4 5 6 7

Dislike **Like**

1 2 3 4 5 6 7

Go to Top of Next Column →

Circle the number that best represents how much you agree or disagree with the sentences below.

When other people see me drinking Juice, they think of me in a certain way.

Disagree Agree

1 2 3 4 5 6 7

You can tell a lot about a person by seeing what kind of Juice he/she drinks.

Disagree Agree

1 2 3 4 5 6 7

Juice helps me express who I am.

Disagree Agree

1 2 3 4 5 6 7

Juice is "me".

Disagree Agree

1 2 3 4 5 6 7

Seeing somebody else drink Juice tells me a lot about that person.

Disagree Agree

1 2 3 4 5 6 7

When I drink Juice, others see me the way I want them to see me.

Disagree Agree

1 2 3 4 5 6 7

Next Page →☺

21. Compact Discs (CDs)

Circle the number that best represents how you feel about the product listed above.

Bad						**Good**
1	2	3	4	5	6	7
Unfavorable						**Favorable**
1	2	3	4	5	6	7
Disagreeable						**Agreeable**
1	2	3	4	5	6	7
Unpleasant						**Pleasant**
1	2	3	4	5	6	7
Negative						**Positive**
1	2	3	4	5	6	7
Dislike						**Like**
1	2	3	4	5	6	7

Go to Top of Next Column →

Circle the number that best represents how much you agree or disagree with the sentences below.

When other people see me playing CDs, they think of me in a certain way.

Disagree						Agree
1	2	3	4	5	6	7

You can tell a lot about a person by seeing what kind of CDs he/she has.

Disagree						Agree
1	2	3	4	5	6	7

CDs help me express who I am.

Disagree						Agree
1	2	3	4	5	6	7

CDs are "me".

Disagree						Agree
1	2	3	4	5	6	7

Seeing somebody else's CDs tells me a lot about that person.

Disagree						Agree
1	2	3	4	5	6	7

When I play CDs, others see me the way I want them to see me.

Disagree						Agree
1	2	3	4	5	6	7

Stop! Good Job! ☺

APPENDIX F
ARGUMENT QUALITY PRETEST

What Do You Think?

I want to know what you think about several arguments (claims) for Pringles Potato Chips…

There are no right or wrong answers.
Answer the questions as best you can.
Just mark answers that reflect what YOU THINK!

Read and listen to the directions carefully.

Name:_____

School Grade:_____

How old are you?_____

Circle One: **Boy** **Girl**

Circle One: **White** **Black** **Hispanic** **Asian**

Native American **Other**

Zip code (for your school):_____

ID#:_____ **(leave blank)**

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Wait until you are told to do so

DIRECTIONS:

Please tell me how persuasive (believable) you think each statement about Pringles Potato Chips is. Persuasive means how convincing an argument or claim about a product is. For example, if a commercial says Pringles Potato Chips are the best potato chip ever made, then I might think that is a very persuasive claim. It might make me want to buy Pringles. So, I would rate that statement very high. If a commercial says Pringles cost a lot, then I would rate that statement really low because it doesn't make me want to buy Pringles. I don't want to know what you think about Pringles based on how you feel about Pringles from eating them before (prior experience). I want to know how persuasive (believable) or convincing you think each statement is. Let's look at an example.

EXAMPLE

Here are what the numbers stand for:

Number 7 means that you have a VERY STRONG FEELING on the **positive (good) side**
Number 6 means that you have a STRONG FEELING on the **positive (good) side**
Number 5 means that you have a FAIRLY WEAK FEELING on the **positive (good) side**
Number 4 means that you have a NEUTRAL FEELING (undecided) one way or the other
Number 3 means that you have a FAIRLY WEAK FEELING on the **negative (bad) side**
Number 2 means that you have a STRONG FEELING on the **negative (bad) side**
Number 1 means that you have a VERY STRONG FEELING on the **negative (bad) side**

CHECK one box on each line to indicate what you think about the argument for Pringles Potato Chips.

Pringles Potato Chips are fabulous to eat.

	1	2	3	4	5	6	7	
Doesn't make me want it	❑	❑	❑	❑	❑	❑	❑	Makes me want it
Doesn't make sense	❑	❑	❑	❑	❑	❑	❑	Makes sense
Not believable	❑	❑	❑	❑	❑	❑	❑	Believable
Weak	❑	❑	❑	❑	❑	❑	❑	Strong

Turn to Next Page →☺

Wait until you are told to do so

CHECK one box on each line to indicate what yon think about the argument for Pringles Potato Chips.

Number 7 means that you have a VERY STRONG FEELING on the **positive (good) side**
Number 6 means that you have a STRONG FEELING on the **positive (good) side**
Number 5 means that you have a FAIRLY WEAK FEELING on the **positive (good) side**
Number 4 means that you have a NEUTRAL FEELING (undecided) one way or the other
Number 3 means that you have a FAIRLY WEAK FEELING on the **negative (bad) side**
Number 2 means that you have a STRONG FEELING on the **negative (had) side**
Number 1 means that you have a VERY STRONG FEELING on the **negative (had) side**

Pringles Potato Chips are good for you.

	1	2	3	4	5	6	7	
Doesn't make me want it	❑	❑	❑	❑	❑	❑	❑	Makes me want it
Doesn't make sense	❑	❑	❑	❑	❑	❑	❑	Makes sense
Not believable	❑	❑	❑	❑	❑	❑	❑	Believable
Weak	❑	❑	❑	❑	❑	❑	❑	Strong

Pringles Potato Chips taste good.

	1	2	3	4	5	6	7	
Doesn't make me want it	❑	❑	❑	❑	❑	❑	❑	Makes me want it
Doesn't make sense	❑	❑	❑	❑	❑	❑	❑	Makes sense
Not believable	❑	❑	❑	❑	❑	❑	❑	Believable
Weak	❑	❑	❑	❑	❑	❑	❑	Strong

Pringles Potato Chips have less fat.

	1	2	3	4	5	6	7	
Doesn't make me want it	❑	❑	❑	❑	❑	❑	❑	Makes me want it
Doesn't make sense	❑	❑	❑	❑	❑	❑	❑	Makes sense
Not believable	❑	❑	❑	❑	❑	❑	❑	Believable
Weak	❑	❑	❑	❑	❑	❑	❑	Strong

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Pringles Potato Chips have more vitamins and minerals than other snacks.

	1	2	3	4	5	6	7	
Doesn't make me want it	❑	❑	❑	❑	❑	❑	❑	Makes me want it
Doesn't make sense	❑	❑	❑	❑	❑	❑	❑	Makes sense
Not believable	❑	❑	❑	❑	❑	❑	❑	Believable
Weak	❑	❑	❑	❑	❑	❑	❑	Strong

Pringles Potato Chips give you energy.

	1	2	3	4	5	6	7	
Doesn't make me want it	❑	❑	❑	❑	❑	❑	❑	Makes me want it
Doesn't make sense	❑	❑	❑	❑	❑	❑	❑	Makes sense
Not believable	❑	❑	❑	❑	❑	❑	❑	Believable
Weak	❑	❑	❑	❑	❑	❑	❑	Strong

Pringles Potato Chips are made with real potato flakes.

	1	2	3	4	5	6	7	
Doesn't make me want it	❑	❑	❑	❑	❑	❑	❑	Makes me want it
Doesn't make sense	❑	❑	❑	❑	❑	❑	❑	Makes sense
Not believable	❑	❑	❑	❑	❑	❑	❑	Believable
Weak	❑	❑	❑	❑	❑	❑	❑	Strong

Pringles Potato Chips are made with wholesome ingredients.

	1	2	3	4	5	6	7	
Doesn't make me want it	❑	❑	❑	❑	❑	❑	❑	Makes me want it
Doesn't make sense	❑	❑	❑	❑	❑	❑	❑	Makes sense
Not believable	❑	❑	❑	❑	❑	❑	❑	Believable
Weak	❑	❑	❑	❑	❑	❑	❑	Strong

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Pringles Potato Chips are less greasy than other chips.

	1	2	3	4	5	6	7	
Doesn't make me want it	❑	❑	❑	❑	❑	❑	❑	Makes me want it
Doesn't make sense	❑	❑	❑	❑	❑	❑	❑	Makes sense
Not believable	❑	❑	❑	❑	❑	❑	❑	Believable
Weak	❑	❑	❑	❑	❑	❑	❑	Strong

Pringles Potato Chips are packed in special cans for freshness.

	1	2	3	4	5	6	7	
Doesn't make me want it	❑	❑	❑	❑	❑	❑	❑	Makes me want it
Doesn't make sense	❑	❑	❑	❑	❑	❑	❑	Makes sense
Not believable	❑	❑	❑	❑	❑	❑	❑	Believable
Weak	❑	❑	❑	❑	❑	❑	❑	Strong

Four out of five kids choose Pringles Potato Chips over other chips.

	1	2	3	4	5	6	7	
Doesn't make me want it	❑	❑	❑	❑	❑	❑	❑	Makes me want it
Doesn't make sense	❑	❑	❑	❑	❑	❑	❑	Makes sense
Not believable	❑	❑	❑	❑	❑	❑	❑	Believable
Weak	❑	❑	❑	❑	❑	❑	❑	Strong

Once you pop open a can of Pringles Potato Chips you can't stop eating them.

	1	2	3	4	5	6	7	
Doesn't make me want it	❑	❑	❑	❑	❑	❑	❑	Makes me want it
Doesn't make sense	❑	❑	❑	❑	❑	❑	❑	Makes sense
Not believable	❑	❑	❑	❑	❑	❑	❑	Believable
Weak	❑	❑	❑	❑	❑	❑	❑	Strong

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Once you pop open a can of Pringles Potato Chips the fun don't stop.

	1	2	3	4	5	6	7	
Doesn't make me want it	❑	❑	❑	❑	❑	❑	❑	Makes me want it
Doesn't make sense	❑	❑	❑	❑	❑	❑	❑	Makes sense
Not believable	❑	❑	❑	❑	❑	❑	❑	Believable
Weak	❑	❑	❑	❑	❑	❑	❑	Strong

Pringles Potato Chips are really healthy snacks.

	1	2	3	4	5	6	7	
Doesn't make me want it	❑	❑	❑	❑	❑	❑	❑	Makes me want it
Doesn't make sense	❑	❑	❑	❑	❑	❑	❑	Makes sense
Not believable	❑	❑	❑	❑	❑	❑	❑	Believable
Weak	❑	❑	❑	❑	❑	❑	❑	Strong

Pringles Potato Chips are delicious.

	1	2	3	4	5	6	7	
Doesn't make me want it	❑	❑	❑	❑	❑	❑	❑	Makes me want it
Doesn't make sense	❑	❑	❑	❑	❑	❑	❑	Makes sense
Not believable	❑	❑	❑	❑	❑	❑	❑	Believable
Weak	❑	❑	❑	❑	❑	❑	❑	Strong

Pringles Potato Chips have a fresh potato flavor.

	1	2	3	4	5	6	7	
Doesn't make me want it	❑	❑	❑	❑	❑	❑	❑	Makes me want it
Doesn't make sense	❑	❑	❑	❑	❑	❑	❑	Makes sense
Not believable	❑	❑	❑	❑	❑	❑	❑	Believable
Weak	❑	❑	❑	❑	❑	❑	❑	Strong

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Pringles Potato Chips are stacked in special cans.

	1	2	3	4	5	6	7	
Doesn't make me want it	❑	❑	❑	❑	❑	❑	❑	Makes me want it
Doesn't make sense	❑	❑	❑	❑	❑	❑	❑	Makes sense
Not believable	❑	❑	❑	❑	❑	❑	❑	Believable
Weak	❑	❑	❑	❑	❑	❑	❑	Strong

Pringles Potato Chips make lunch better.

	1	2	3	4	5	6	7	
Doesn't make me want it	❑	❑	❑	❑	❑	❑	❑	Makes me want it
Doesn't make sense	❑	❑	❑	❑	❑	❑	❑	Makes sense
Not believable	❑	❑	❑	❑	❑	❑	❑	Believable
Weak	❑	❑	❑	❑	❑	❑	❑	Strong

Pringles Potato Chips have a unique shape.

	1	2	3	4	5	6	7	
Doesn't make me want it	❑	❑	❑	❑	❑	❑	❑	Makes me want it
Doesn't make sense	❑	❑	❑	❑	❑	❑	❑	Makes sense
Not believable	❑	❑	❑	❑	❑	❑	❑	Believable
Weak	❑	❑	❑	❑	❑	❑	❑	Strong

You and your friends will love Pringles Potato Chips.

	1	2	3	4	5	6	7	
Doesn't make me want it	❑	❑	❑	❑	❑	❑	❑	Makes me want it
Doesn't make sense	❑	❑	❑	❑	❑	❑	❑	Makes sense
Not believable	❑	❑	❑	❑	❑	❑	❑	Believable
Weak	❑	❑	❑	❑	❑	❑	❑	Strong

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Pringles Potato Chips are fun to eat.

	1	2	3	4	5	6	7	
Doesn't make me want it	❑	❑	❑	❑	❑	❑	❑	Makes me want it
Doesn't make sense	❑	❑	❑	❑	❑	❑	❑	Makes sense
Not believable	❑	❑	❑	❑	❑	❑	❑	Believable
Weak	❑	❑	❑	❑	❑	❑	❑	Strong

Pringles Potato Chips stay in one piece.

	1	2	3	4	5	6	7	
Doesn't make me want it	❑	❑	❑	❑	❑	❑	❑	Makes me want it
Doesn't make sense	❑	❑	❑	❑	❑	❑	❑	Makes sense
Not believable	❑	❑	❑	❑	❑	❑	❑	Believable
Weak	❑	❑	❑	❑	❑	❑	❑	Strong

Pringles Potato Chips <u>do not</u> break like bags of chips.

	1	2	3	4	5	6	7	
Doesn't make me want it	❑	❑	❑	❑	❑	❑	❑	Makes me want it
Doesn't make sense	❑	❑	❑	❑	❑	❑	❑	Makes sense
Not believable	❑	❑	❑	❑	❑	❑	❑	Believable
Weak	❑	❑	❑	❑	❑	❑	❑	Strong

Pringles Potato Chips crunch when you munch.

	1	2	3	4	5	6	7	
Doesn't make me want it	❑	❑	❑	❑	❑	❑	❑	Makes me want it
Doesn't make sense	❑	❑	❑	❑	❑	❑	❑	Makes sense
Not believable	❑	❑	❑	❑	❑	❑	❑	Believable
Weak	❑	❑	❑	❑	❑	❑	❑	Strong

<u>Turn to Next Page</u> →☺

Pringles Potato Chips are seasoned chips.

	1	2	3	4	5	6	7	
Doesn't make me want it	❑	❑	❑	❑	❑	❑	❑	Makes me want it
Doesn't make sense	❑	❑	❑	❑	❑	❑	❑	Makes sense
Not believable	❑	❑	❑	❑	❑	❑	❑	Believable
Weak	❑	❑	❑	❑	❑	❑	❑	Strong

Pringles Potato Chips are crispy chips.

	1	2	3	4	5	6	7	
Doesn't make me want it	❑	❑	❑	❑	❑	❑	❑	Makes me want it
Doesn't make sense	❑	❑	❑	❑	❑	❑	❑	Makes sense
Not believable	❑	❑	❑	❑	❑	❑	❑	Believable
Weak	❑	❑	❑	❑	❑	❑	❑	Strong

Pringles Potato Chips are the Stacked Snack.

	1	2	3	4	5	6	7	
Doesn't make me want it	❑	❑	❑	❑	❑	❑	❑	Makes me want it
Doesn't make sense	❑	❑	❑	❑	❑	❑	❑	Makes sense
Not believable	❑	❑	❑	❑	❑	❑	❑	Believable
Weak	❑	❑	❑	❑	❑	❑	❑	Strong

Stop! Good Job! ☺

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BIOGRAPHICAL SKETCH

Bradford L. Yates was born in Lynchburg, Virginia, on September 24, 1967. He received the B.A. summa cum laude in communication studies from Lynchburg College in 1989. He earned the M.S. in radio/television from Syracuse University in 1991 and the M.Ed. in curriculum and instruction from Lynchburg College in 1993. In 1995, he began doctoral studies in mass communication at the University of Florida in Gainesville.

During his undergraduate and graduate studies, Yates served as a news production intern at the ABC affiliate, WSET-TV 13, in Lynchburg, Virginia, and a sports intern at NBC's WRC-TV 4 in Washington, DC. He worked as an associate producer at Little Pond Productions, an audiovisual production company in Lynchburg, for a year before returning to Lynchburg College as an instructor and video production specialist. For three years, Yates taught courses in audiovisual communication, broadcast journalism, and public speaking in addition to producing and editing the cable access program, "Eye On LC," a video newsmagazine about life at Lynchburg College and beyond. While at the University of Florida, he taught Introduction to Telecommunications, TV and the American Family, Electronic Field Production, and Advanced Television Production.

In 2000, Yates joined the faculty as an assistant professor of mass communications at the State University of West Georgia.

I certify that I have read this study and that in my opinion it conforms to the acceptable standards of scholarly presentation and is fully adequate, in scope and quality, as a dissertation for the degree of Doctor of Philosophy.

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